

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MICROSOFT CORPORATION
Petitioner,

v.

EDGE NETWORKING SYSTEMS, LLC,
Patent Owner.

Case No. IPR2025-00617
Patent No. 10,893,095

**PETITIONER'S OPPOSITION TO PATENT OWNER'S REQUEST
FOR DISCRETIONARY DENIAL OF INSTITUTION**

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PETITIONER'S EXHIBIT LIST

<i>Exhibit #</i>	<i>Description</i>
1001	U.S. Patent No. 10,893,095 (the "'095 Patent").
1002	Prosecution history of the '095 Patent (the "'095 File History").
1003	Declaration of Petitioner's Expert, Dr. Erez Zadok, ("Zadok").
1004	U.S. Patent No. 6,496,575 to Vasell, et al. ("Vasell Patent") (collectively, with EX1015 and EX1016, "Vasell").
1005	File history of the parent patent to the '095 Patent, U.S. Patent No. 9,843,624 (the "'624 Patent").
1006	File history of another parent patent of the '095 Patent, U.S. Patent No. 10,686,871 (the "'871 Patent").
1007	File history of a continuation patent of the '095 Patent, U.S. Patent No. 11,695,823 (the "'823 Patent").
1008	Excerpts from A. de Castro Alves, "OSGi in Depth", Manning Publications Company, 2012 ("Alves").
1009	Excerpts from R. Hall, et al., "OSGi in Action - Creating Modular Applications in Java", Manning Publications Company, April 2011 ("Hall").
1010	J. E. Kim, et al., "Seamless Integration of Heterogeneous Devices and Access Control in Smart Homes," 2012 Eighth International Conference on Intelligent Environments, Guanajuato, Mexico, June 26-29, 2012, pp. 206-213 ("Kim").
1011	J. S. Rellermeyer and S. Bagchi, "Dependability as a cloud service - a modular approach," IEEE/IFIP International Conference on Dependable Systems and Networks Workshops (DSN 2012), Boston, MA, USA, 2012, pp. 1-6 ("Rellermeyer").
1012	S. Kächele, et al., "Component-based scalability for cloud applications", Proceedings of the 3 rd International Workshop on Cloud Data and Platforms (CloudDP '13), April 14, 2013, Prague, Czech Republic, 19–24 ("Kachele").
1013	OSGi Alliance, "About the OSGi Service Platform", Technical Whitepaper, Revision 4.1, November 11, 2005, archived on November 30, 2005 at Internet Archive's Wayback Machine at https://web.archive.org/web/20051130032628/http://www.osgi.org/documents/collateral/TechnicalWhitePaper2005osgi-sp-overview.pdf ("OSGi 2005 Whitepaper").

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<i>Exhibit #</i>	<i>Description</i>
1014	Declaration of June A. Munford.
1015	U.S. Provisional Patent Application No. 60/088,437, filed on June 8, 1998, claimed as a priority application in, and incorporated by reference into, EX1004 (“1 st Vasell Provisional”) (collectively, with EX1004 and EX1016, “Vasell”).
1016	U.S. Provisional Patent Application No. 60/123,971, filed on March 12, 1999, claimed as a priority application in, and incorporated by reference into, EX1004 (“2 nd Vasell Provisional”) (collectively, with EX1004 and EX1015, “Vasell”), which includes a copy of the article published as Idermark, T., Lilliestråle, M., & Vasell, J., “Ericsson's e-box system—An electronic services enabler”, Ericsson Review, (1), 1999, 38-44, as confirmed by Ericsson's website archived, for example, on March 3, 2000 at Internet Archive's Wayback Machine at https://web.archive.org/web/20000303195310/http://www.ericsson.se/review/issues.taf and, for example, on February 16, 2003 and November 27, 2004 at Internet Archive's Wayback Machine at https://web.archive.org/web/20030216191220/http://www.ericsson.com/about/publications/review/1999_01/23.shtml and https://web.archive.org/web/20041127035720/http://www.ericsson.com/about/publications/review/1999_01/files/1999015.pdf respectively.
1017	“About Gatespace”, Gatespace AB website, archived on January 6, 2000 at Internet Archive's Wayback Machine at https://web.archive.org/web/20000106145021/http://www.gatespace.com/ (“About Gatespace 2000”).
1018	“Carlstedt Research & Technology Forms New Company for Developing Software for ‘The Intelligent Home’ in Cooperation with Ericsson”, September 30, 1999, Gatespace AB website, archived on February 12, 2001 at Internet Archive's Wayback Machine at https://web.archive.org/web/20010212054449/http://www.gatespace.com/news/archive/19990930_en_v3.shtml (“Gatespace Formation Press Release”).
1019	“Ericsson e-services is a part of the Open Services Gateway Initiative (OSGI)”, Ericsson e-services website, archived on February 29, 2000 at Internet Archive's Wayback Machine at https://web.archive.org/web/20000229111550/http://www.ericsson.com:80/wireless/products/ebox/links/osgi.shtml (“Ericsson E-Services WebPage”).

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<i>Exhibit #</i>	<i>Description</i>
1020	“Fifteen industry leaders to create standard for bringing Internet-based services to the networked home”, March 1, 1999, Ericsson e-services website, archived on May 28, 2000 at Internet Archive’s Wayback Machine at https://web.archive.org/web/20000528223608/http://www.ericsson.com/wireless/products/ebox/news/990301.shtml (“OSGi Announcement on Ericsson E-Services WebPage”).
1021	“People”, Carlstedt Research & Technology AB website, archived on January 6, 2000 at Internet Archive’s Wayback Machine at https://web.archive.org/web/20000106204945/http://www.crt.se/about/people.en.html (“CR&T People 2000”).
1022	“Open Services Gateway Initiative: Charter”, OSGi website, archived on April 19, 2000 at Internet Archive’s Wayback Machine at https://web.archive.org/web/20000419181219/http://www.osgi.org/about/charter.html (“OSGi Charter 2000”).
1023	“Open Services Gateway Initiative: Officers”, OSGi website, archived on April 14, 2000 at Internet Archive’s Wayback Machine at https://web.archive.org/web/20000414133426/http://www.osgi.org/about/officers.html (“OSGi Officers 2000”).
1024	“Open Services Gateway Initiative Elects New Leadership”, Home Toys Inc. website, May 23, 2001, archived on July 8, 2001 at Internet Archive’s Wayback Machine at https://web.archive.org/web/20010708123711/http://www.hometoys.com/releases/jun01/osgi01.htm (“OSGi Leadership 2001”).
1025	“Management Team”, Gatespace AB website, archived on February 8, 2002 at Internet Archive’s Wayback Machine at https://web.archive.org/web/20020208031748/http://www.gatespace.com/company/management.shtml (“Gatespace Management 2002”).
1026	“About Us: Background”, Gatespace AB website, archived on February 6, 2002 at Internet Archive’s Wayback Machine at https://web.archive.org/web/20020206205742/http://www.gatespace.com/company/ (“About Gatespace 2002”).
1027	“About Makewave: History in Making”, Makewave AB website, archived on August 16, 2007 at Internet Archive’s Wayback Machine at https://web.archive.org/web/20070816163615/http://www.makewave.com/site.en/about/history.shtml (“About Makewave 2007”).

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<i>Exhibit #</i>	<i>Description</i>
1028	The OSGi Alliance, “OSGi Service Platform Enterprise Specification”, Release 4, Version 4.2, March 2010 (“OSGi Enterprise Specification”).
1029	T. Forst, “Cisco Application eXtension Platform – OSGi Add-on as universal Middleware for Your Applications”, May 2008, AutomatedBuildings.com, archived on May 17, 2008 at Internet Archive’s Wayback Machine at https://web.archive.org/web/20080517111602/www.automatedbuildings.com/news/may08/articles/prosyst/080427034829prosyst.htm (“Forst”).
1030	U.S. Patent Publication No. 2013/0086147 to Kashyap, filed October 3, 2011, published April 4, 2013 (“Kashyap”).
1031	Excerpts from A.S. Tanenbaum, “Modern Operating Systems”, Prentice Hall, 3 rd edition, 2008 (“Tanenbaum 2008”).
1032	Excerpts from A.S. Tanenbaum, “Computer Networks”, Prentice Hall, 3 rd edition, 1996 (“Tanenbaum 1996”).
1033	Excerpts from D. Downing, et al., “Dictionary of Computer and Internet Terms”, Barron’s Educational Series, Inc., 11 th edition, 2013 (“Downing”).
1034	Excerpts from E. Cole, et al., “Network Security Bible”, Wiley Publishing, Inc., 2 nd edition, 2009 (“Cole”).
1035	My Curriculum Vitae (CV).
1036	S. Soltesz, et al., “Container-based Operating System Virtualization: A Scalable, High Performance Alternative to Hypervisors”, In Proceedings of the 2 nd ACM SIGOPS/EuroSys European Conference on Computer Systems (EuroSys ’07), March 21-23, 2007, Lisbon, Portugal, pp. 275-287, 2007 (“Soltesz”).
1037	<i>Intentionally Left Blank</i>
1038	<i>Intentionally Left Blank</i>
1039	Li, et al., “ExpoNet: A Flexible Platform for Concurrent Experiments on Programmable Infrastructure”, 2011 IEEE Global Telecommunications Conference - GLOBECOM 2011, Houston, TX, USA, 2011, pp. 1-5 (“Li”).
1040	<i>Intentionally Left Blank</i>

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<i>Exhibit #</i>	<i>Description</i>
1041	P. Kriens, “The Bundle Repository”, OSGi Alliance Blog, April 7, 2006, archived on May 4, 2006 at Internet Archive’s Wayback Machine at https://web.archive.org/web/20060504203641/http://www.osgi.org/blog/2006/04/bundle-repository.html (“Kriens OSGi Blog”).
1042	“Knoplerfish Pro Premium” and “Knoplerfish Pro Enterprise” Data Sheets, Makewave AB, 2010, respectively archived on February 20, 2011 at Internet Archive’s Wayback Machine at https://web.archive.org/web/20110220123804/http://www.makewave.com:80/resources/docs/datasheets/MD-042-A1-knoplerfish_pro_premium_osgi.pdf and https://web.archive.org/web/20110220123819/http://www.makewave.com:80/resources/docs/datasheets/MD-047-A1-knoplerfish_pro_enterprise_osgi.pdf (“Knoplerfish”).
1043	R. Kawashima, “vNFC: A Virtual Networking Function Container for SDN-enabled Virtual Networks”, 2012 Second Symposium on Network Cloud Computing and Applications, London, UK, 2012, pp. 124-129 (“Kawashima”).
1044	Excerpts from A.S. Tanenbaum, “Modern Operating Systems”, Prentice Hall, 2 nd edition, 2001 (“Tanenbaum 2001”).
1045	Excerpts from S. Garfinkel, et al., “Web Security & Commerce”, O’Reilly & Associates, 1997 (“Garfinkel”).
1046	Oasis Standard Specification, “Web Services Security: SOAP Message Security 1.1 (WS-Security 2004), February 1, 2006, archived on February 6, 2007 at Internet Archive’s Wayback Machine at https://web.archive.org/web/20070206143722/http://www.oasis-open.org/committees/download.php/16790/wss-v1.1-spec-os-soapmessagesecurity.pdf , and accessible from OASIS Web Services Security (WSS) Technical Committee web page, as archived on December 5, 2006 at Internet Archive’s Wayback Machine at https://web.archive.org/web/20061205032600/http://oasis-open.org/committees/tc_home.php?wg_abbrev=wss#technical (“Oasis - SOAP Security”).

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<i>Exhibit #</i>	<i>Description</i>
1047	“Web Service Security Cheat Sheet”, The Open Web Application Security Project (OWASP), archived on June 12, 2012 at Internet Archive’s Wayback Machine at https://web.archive.org/web/20120612205800/https://www.owasp.org/index.php/Web_Service_Security_Cheat_Sheet, and accessible from OWASP’s (the free and open software security community) web pages, as archived on June 10, 2012 at Internet Archive’s Wayback Machine at https://web.archive.org/web/20120610001928/https://www.owasp.org/index.php/Main_Page, and as archived on June 10, 2012 at Internet Archive’s Wayback Machine at https://web.archive.org/web/20120610091415/https://www.owasp.org/index.php/Cheat_Sheets (“OWASP - WSS Security”).
1048	“REST Security Cheat Sheet”, The Open Web Application Security Project (OWASP), archived on January 15, 2013 at Internet Archive’s Wayback Machine at https://web.archive.org/web/20130115190935/https://www.owasp.org/index.php/REST_Security_Cheat_Sheet, and accessible from OWASP’s (the free and open software security community) web pages, as archived on January 4, 2013 at Internet Archive’s Wayback Machine at https://web.archive.org/web/20130104230717/https://www.owasp.org/index.php/Main_Page, and as archived on January 15, 2013 at Internet Archive’s Wayback Machine at https://web.archive.org/web/20130115215253/https://www.owasp.org/index.php/Cheat_Sheets (“OWASP – REST Security”).
1049	<i>Intentionally Left Blank</i>
1050	The Open Services Gateway Initiative, “Specification Overview”, Version 1.0, January 2000, archived on August 31, 2000 at Internet Archive’s Wayback Machine at https://web.archive.org/web/20000831061202/http://www.osgi.org/about/specoverview.pdf (“OSGi 2000 Overview”).
1051	R. Hall, “Oscar Bundle Repository”, archived on June 30, 2004 at Internet Archive’s Wayback Machine at https://web.archive.org/web/20040630163519/http://oscar-osgi.sourceforge.net:80/ (“OBR 2004”).

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<i>Exhibit #</i>	<i>Description</i>
1052	Excerpts from B. Sosinsky, “Cloud Computing Bible”, Wiley Publishing, Inc., 2011 (“Sosinsky”).
1053	“Java Secure Socket Extension (JSSE) Reference Guide for Java Platform Standard Edition 7”, Oracle Java SE Documentation, archived on November 25, 2011 at Internet Archive’s Wayback Machine at https://web.archive.org/web/20111125044243/http://docs.oracle.com/javase/7/docs/technotes/guides/security/jsse/JSSERefGuide.html (“JSSE Guide”).
1054	“Java™ Remote Method Invocation API (Java RMI)”, Oracle Java SE Documentation, archived on November 27, 2011 at Internet Archive’s Wayback Machine at https://web.archive.org/web/20111127072151/http://docs.oracle.com/javase/7/docs/technotes/guides/rmi/index.html (“Java RMI Overview”).
1055	“Using Custom Socket Factories with Java RMI”, Oracle Java SE Documentation, archived on April 3, 2012 at Internet Archive’s Wayback Machine at https://web.archive.org/web/20120403095031/https://docs.oracle.com/javase/7/docs/technotes/guides/rmi/socketfactory/index.html (“Java RMI Socket Overview”).
1056	“Using Java™ RMI with SSL”, Oracle Java SE Documentation, archived on July 3, 2012 at Internet Archive’s Wayback Machine at https://web.archive.org/web/20120703221253/https://docs.oracle.com/javase/7/docs/technotes/guides/rmi/socketfactory/SSLInfo.html (“Java RMI SSL Overview”).
1057	Microsoft Computer Dictionary, 3rd ed., 1997, excerpts (“Microsoft Computer Dictionary”).
1058	Usenix Jails in FreeBSD for Fun and Profit, Paco Hope, USENIX ;login: The Magazine of Usenix & Sage, vol. 27, number 3, June 2002, archived on March 16, 2003 at Internet Archive’s Wayback Machine at https://web.archive.org/web/20030316225604/http://www.usenix.org/publications/login/2002-06/pdfs/hope.pdf (“Hope”).
1059	Excerpts from Silberschatz et al., Operating System Concepts (8 th Ed. 2009) (“Silberschatz 2009”).
1060	Excerpts from Silberschatz et al., Operating System Concepts (9 th Ed. 2012) (“Silberschatz 2012”).

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<i>Exhibit #</i>	<i>Description</i>
1061	Excerpts from McKusick and Neville-Neil, “The Design and Implementation of the FreeBSD Operating System” (2005) (“McKusick”).
1062	Excerpts from Benevenuti, “Understanding Linux Network Internals” (2006) (“Benevenuti”)
1063	Excerpts from Stallings, “Operating Systems Internals and Design Principles” (7 th ed. 2012) (“Stallings”)
1064	“apache_1.3.19.tar.gz.md5” Hash File, Apache Software Foundation, archived on June 28, 2001 at Internet Archive’s Wayback Machine at https://web.archive.org/web/20010628043950/http://www.apache.org/dist/httpd/apache_1.3.19.tar.gz.md5 .
1065	“apache_1.3.19.tar.gz.asc” Signature File, Apache Software Foundation, archived on June 28, 2001 at Internet Archive’s Wayback Machine at https://web.archive.org/web/20010628043146/apache.org/dist/httpd/apache_1.3.19.tar.gz.asc .
1066	“Apache Archive Distribution Directory”, Apache Software Foundation, archived on July 11, 2001 at Internet Archive’s Wayback Machine at https://web.archive.org/web/20010711223314/http://www.apache.org/dist/httpd/ (“Apache Archive Directory”).
1067	U.S. Department of Commerce, FIPS PUB 186-2, Digital Signature Standard (DSS) (January 27, 2000) (“DSS FIPS PUB”).
1068	J. Preshing, “Hash Collision Probabilities”, Preshing on Programming, May 4, 2011, archived on September 27, 2011 at Internet Archive’s Wayback Machine at https://web.archive.org/web/20110927200414/preshing.com/20110504/hash-collision-probabilities (“Preshing Hash Collision Probabilities”).
1069	“Avalanche Effect”, Wikipedia, archived on April 30, 2010 at Internet Archive’s Wayback Machine at https://web.archive.org/web/20100430122132/https://en.wikipedia.org/wiki/Avalanche_effect (“Wikipedia Avalanche Effect”).
1070	Plaintiff Edge Networking Systems, LLC’s Opening Claim Construction Brief, filed as Document No. 31, on December 17, 2024, in Case No. 1:24-cv-00215-DAE, captioned as <i>Edge Networking Systems, LLC v. Microsoft Corporation</i> (W.D. Texas).

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<i>Exhibit #</i>	<i>Description</i>
1071	August 12, 2024 USPTO Denial of Applicant’s December 1, 2022 Request for Certificate of Correction of the ’095 Patent (“’095 Patent File History Addendum”).
1072	Defendant Microsoft Corporation’s Responsive Claim Construction Brief, filed as Document No. 32, on January 17, 2025, in Case No. 1:24-cv-00215-DAE, captioned as <i>Edge Networking Systems, LLC v. Microsoft Corporation</i> (W.D. Texas).
1073	Scheduling Order, filed as Document No. 27, on September 4, 2024, in Case No. 1:24-cv-00215-DAE, captioned as <i>Edge Networking Systems, LLC v. Microsoft Corporation</i> (W.D. Texas).
1074	Excerpt from Zenious et al., BIODESIGN; THE PROCESS OF INNOVATING MEDICAL TECHNOLOGIES (EX2010 in <i>iRhythm Technologies Inc. v. Welch Allyn Inc.</i> , IPR2025-00363).
1075	March 26, 2025 Email from Petitioner’s Counsel to Patent Owner’s Counsel Containing <i>Sotera</i> Stipulation
1076	April 2025 Emails Between Petitioner’s Counsel and the Board Regarding Petitioner’s Request to File the <i>Sotera</i> Stipulation in the IPRs.
1077	Order Setting <i>Markman</i> Hearing for October 7, 2025, filed as Document No. 41, on June 11, 2025, in Case No. 1:24-cv-00215-DAE, captioned as <i>Edge Networking Systems, LLC v. Microsoft Corporation</i> (W.D. Texas).
1078	Amended Scheduling Order, filed as Document No. 43, on June 27, 2025, in Case No. 1:24-cv-00215-DAE, captioned as <i>Edge Networking Systems, LLC v. Microsoft Corporation</i> (W.D. Texas).
1079	Patent Owner’s Certificate of Formation dated March 27, 2023
1080	Inventor Pouya Taaghola Assignment to Patent Owner, dated April 20, 2023, of the Parent ’624 Patent, the ’871 Patent, the child ’095 Patent, and the child application that eventually issues as the child ’823 Patent.
1081	U.S. Patent Publication No. 2013/0223442 (“ <i>Narayanan</i> ”).
1082	Big Data Federation, Inc. Assignment to Inventor Pouya Taaghola, dated March 16, 2023, of the Parent ’624 Patent, the ’871 Patent, the child ’095 Patent, and the child application that eventually issues as the child ’823 Patent.
1083	U.S. Patent No. 9,843,624 (the “parent ’624 Patent”).

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<i>Exhibit #</i>	<i>Description</i>
1084	Inventor Pouya Taaghol Assignment to Big Data Federation, Inc., dated November 7, 2019, of the Parent '624 Patent.
1085	K. Pentikousis, et al., "MobileFlow: Toward Software-Defined Mobile Networks", published in IEEE Communications Magazine, July 2013 (" <i>Pentikousis</i> ").

I. INTRODUCTION

Petitioner Microsoft Corporation (“Petitioner”) hereby opposes Patent Owner Edge Networking System LLC’s (“PO” or “Patent Owner”) request for discretionary denial of institution of the Petition for *inter partes* review (“IPR”) of the ’095 Patent¹. PO’s Request is primarily based on its assertion that the Petition presents to the Office “the same or substantially the same art or arguments previously presented to the Office” under 35 U.S.C. § 325(d). Req., 3-38. The Request fails because PO’s § 325(d) arguments are based on PO’s mischaracterization of the ’871 Prosecution History, the parent ’624 Prosecution History, the disclosure of the *Vasell* IPR prior art, and the Petition.

At the threshold, in making its argument that *Advanced Bionics* prong one is satisfied, PO concedes – as it must – that **every** prior art reference in the grounds of the Petition – *Vasell*, *Alves*, *Hall*, and *Rellermeyer* – **was completely absent** from the prosecution history of the ’095 Patent (the “’095 Prosecution History”), the prosecution history of the parent ’871 Patent (the “’871 Prosecution History”), the prosecution history of the grandparent ’624 Patent (the “’624 Prosecution

¹ Paper 8 (June 15, 2025), hereinafter “Request” (abbreviated “Req.”).

History”), and the prosecution history of the child ’823 Patent². *Vasell*, *Alves*, *Hall*, and *Rellermeyer* were **not** disclosed in an IDS, **nor** cited by an Examiner, during the ’095 Prosecution History, nor during the respective prosecutions that led to any family member patent of the ’871 Patent, including the parent ’871 Patent, the grandparent ’624 Patent, and the child ’823 Patent. *Cf. Ecto World, LLC v. RAI Strategic Holdings, Inc.*, IPR2024-01280, Paper 13 (May 19, 2025) (designated §A precedential: May 19, 2025). And, nothing in the ’095 Prosecution History, parent ’871 Prosecution History, grandparent ’624 Prosecution History, nor in the prosecution history of any family member of the ’095 Patent, involved the Examiner discussing, applying, or otherwise meaningfully addressing *Vasell*’s disclosure, *Alves*’ disclosure, *Hall*’s disclosure, nor *Rellermeyer*’s disclosure, and none of the arguments set forth in the Petition Grounds were before the Examiner during prosecution.

² The parent ’871 Patent and the child ’823 Patent are the other two Patent Owner patents that Petitioner has challenged in IPR2025-00619 and IPR2025-00618, proceedings in which Patent Owner concurrently filed Requests for discretionary denial of institution of those Petitions.

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The Request contends that the first prong of the *Advanced Bionics* framework is satisfied based on PO's assertion that "with respect to the limitation upon which allowance was based -- i.e., the requirement of a programmable network device 'powered by a sandboxing operating system' -- the Vasell reference advanced in the Petition is cumulative of the Shatzkamer reference applied during prosecution." *See, e.g.*, Req., 5 (original emphasis). However, the examiners during the '095 Prosecution History, parent '871 Prosecution History, and the grandparent '624 Prosecution History did **not** assert that *Shatzkamer* disclosed the "powered by a sandboxing operating system limitation." And, contrary to PO's assertion, this "sandboxing operating system" limitation clearly was **not** "the limitation upon which allowance was based", as the examiner that issued the only prior art rejection throughout the entire parent '871 Prosecution History and '095 Prosecution History found that this limitation was disclosed by a different prior art reference – *Narayanan* –, and the Applicant never argued that the "sandboxing operating system" limitation distinguished *Narayanan* (or any other prior art of record). Therefore, PO's argument that, as applied in the Petition, *Vasell* is cumulative to *Shatzkamer*, as applied during prosecution, is without factual support.

Related to the second prong of the *Advanced Bionics* framework, there was material error in the parent '871 Prosecution History and '095 Prosecution History

because none of the IPR prior art, and none of their highly relevant teachings (which disclose each limitation recited in the Challenged Claims), were considered by the Office, and because the Office's prior art analysis was stunted by (i) the original '871 examiner's reliance on a reference (*Pentikousis*) that was intervening prior art relative to the claimed priority date (which the examiner identified he was aware of in the same Office Action) in the prior art rejections, (ii) the original '871 examiner being replaced with a new '871 examiner, (iii) the new '871 examiner quickly withdrawing the prior art rejections and the § 112 rejections, and allowing the '871 claims after Applicant submitted a terminal disclaimer over the parent '624 Patent (with its narrower claims relative to the respective '871 and '095 Patent claims), without any further discussion, application, or comment about any prior art or about any written description support (whether in the claimed priority provisional application or in the patent specification), and (iv) the same examiner allowing the '095 claims after Applicant submitted terminal disclaimers over the grandparent '624 Patent and the parent '871 Patent, without any prior art or § 112 rejections, and by simply identifying the combination of all of the recited claim elements of '095 Patent claim 1 under "Allowable Subject Matter" in a Notice of Allowance.

Outside of the inapplicability of § 325(d) to the facts here, the Director should not exercise discretion under other relevant factors. Outside of PO's faulty assertion

for the “sandboxing operating system” limitation, the Request is silent on the Petition’s merits, which are particularly strong in this case, and instead resorts to criticizing the form of the Petition’s grounds. Specifically, PO alleges “gamesmanship” related to the “sandboxing operating system” limitation (Req. 1-2, 43-44), but these allegations are without merit because they are based on the same faulty assertion underlying PO’s § 325(d) arguments, and based on PO’s mischaracterizations of *Vasell*’s disclosure and the Petition. PO’s allegations of overuse of expert testimony (Req. 1-2, 38-40) are also based on PO’s mischaracterizations of *Vasell*’s disclosure and the Petition for the “sandboxing operating system” limitation; indeed, as confirmed by the Petition, *Vasell*’s disclosure – and not Petitioner’s expert testimony – is what Petitioner maps the “sandboxing operating system” term onto. PO’s allegation that Petitioner “attempts to pass off a fabricated version Figure 2 of *Vasell*” (Req. 2, 42-43) is belied by the fact that “Annotated FIG. 2” (as it is referred to in the Petition) is annotated accurately to *Vasell*’s disclosure, and annotated accurately to the particular disclosed embodiments of *Vasell* that are quoted, cited and relied on in the Petition. And, PO’s remaining “gamesmanship” allegations (Req., 2, 40-42) also fall flat as Petitioner followed existing Board regulations and guidance in the “common practice” situation where § 112(f) indefiniteness is pled in related district court litigation but is barred by statute from being pled in an IPR.

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Finally, material differences between the grandparent '624 Patent claims and the '095 Patent claims, PO's recent formation as a company (March 27, 2023), the fact that the '095 Patent was recently acquired by PO (April 20, 2023), the fact that the '095 Patent has "not been in force for a significant period of time" (having issued in January 2021), PO's filing of a non-publication request during prosecution of the '095 Patent, and APA considerations, confirm that Patent Owner "has not developed strong settled expectations that favor discretionary denial" here.

Accordingly, Petitioner hereby respectfully requests that the Director deny PO's Request and grant the Petition to institute *inter partes* review of the '095 Patent.

II. STIPULATION

Petitioner entered a *Sotera* stipulation by an email sent to PO on March 26, 2025 ("the *Sotera* Stipulation," EX1075). Petitioner's stipulation reads, *inter alia*,:

if the PTAB institutes these IPRs (IPR2025-00617, -00618, -00619), Microsoft will not pursue in this district court litigation the specific invalidity grounds that it raised in these IPR petitions, nor any other invalidity ground that Microsoft raised or could have reasonably raised in these IPR petitions under §§ 102 or 103, against the asserted claims of the patents-in-suit. *Sotera Wireless, Inc. v. Masimo Corp.*, Case IPR2020-01019, Paper 12 (PTAB Dec. 1, 2020) (precedential).

EX1075.

On March 31, 2025, after conferring with PO's counsel, Petitioner requested leave from the Board to file the *Sotera* Stipulation. EX1076, 2. On April 3, 2025,

the Board replied that “[t]hese cases have not yet been assigned to panels. Once they have been, your request will be forwarded to the panels.” EX1076, 1-2.³

III. THE DIRECTOR SHOULD NOT DENY INSTITUTION UNDER 35 U.S.C. § 325(D)

When determining whether to exercise discretion under § 325(d), “the Board uses the following two-part framework: (1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and (2) if either condition of first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of the challenged claims.” *Advanced Bionics, LLC v. MED-EL Elektromedizinische Geräte GmbH*, IPR2019-01469, Paper 6 at 8 (Feb. 13, 2020) (designated precedential: March 24, 2020). “[T]he *Becton, Dickinson* factors provide useful insight into how to apply the [*Advanced Bionics* two-part] framework under 35 U.S.C. § 325(d).” *Id.* at Paper 6 at 9-10. “If, after review of [*Becton, Dickinson*] factors (a), (b), and (d), it is determined that the same or substantially the same art

³ PO did not raise *Fintiv* in the Request, and Petitioner’s *Sotera* Stipulation and the continued lack of trial date in the related litigation (*see* EX1078) are further reasons that discretionary denial is not warranted in this case.

or arguments previously were presented to the Office, then factors (c), (e), and (f) relate to whether the petitioner has demonstrated a material error by the Office.”

Id.

**A. None of the Four (4) References in the IPR Grounds Were
Previously Presented to the Office,**

Patent Owner concedes that every reference in the grounds of the Petition – *Vasell, Alves, Hall, and Rellermeyer* – was **completely absent** from the '095 Prosecution History, **completely absent** from the parent '871 Prosecution History, **completely absent** from the grandparent '624 Prosecution History, and **completely absent** from the prosecution history of the child '823 Patent.

These facts alone distinguish the particular facts of this IPR from the facts of every decision cited by the PO and every decision that the Board has designated precedential under 35 U.S.C. § 325(d). *See Ecto World*, IPR2024-01280, Paper 13 at 2-4 (“the Petition relies exclusively on prior art references that were submitted to the Office in an ...IDS ... during the prosecution of [the Challenged Patent].”); *Advanced Bionics*, IPR2019-01469, Paper 6 at 6, 13-19 (“it is undisputed that Zimmerling was evaluated during prosecution of the [Challenged Patent], [and] Petitioner extensively relies on Zimmerling in both of the asserted grounds of unpatentability”); *Oticon Medical AB v. Cochlear Limited*, IPR2019-00975, IPR2019-00975, Paper 15 at 5, 9-10 (PTAB October 16, 2019) (designated §II.B

and §II.C precedential: March 24, 2020) (at least the primary reference in every IPR ground – “Westerkull ’794” – was “expressly considered during prosecution of the [Challenged Patent] and [the parent application of the Challenged Patent].”); *Becton, Dickinson & Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8 at 6, 16-28 (PTAB December 15, 2017) (designated §III.C.5, first paragraph, precedential: August 2, 2019) (for IPR Ground 1 – the only IPR ground for which § 325(d) was evaluated – “Woehr, relied upon by Petitioner as the base reference here, was also the base reference in the Examiner’s Woehr/Rogers obviousness rejection during examination.”; notably, the Board did not evaluate § 325(d) for the other three (3) IPR grounds.).

B. *Vasell* as Applied in the Petition is Not Cumulative of *Shatzkamer* as Applied During the Prosecution Histories of this Patent Family

Patent Owner contends that prong 1 of the *Advanced Bionics* framework is satisfied, and *Becton Dickinson* factors (a)-(d) weigh in favor of the Board exercising discretion under § 325(d), asserting that the *Vasell* reference is cumulative of the *Shatzkamer* reference as applied during prosecution.

Specifically, PO asserts that “with respect to the limitation upon which allowance was based – i.e., the requirement of a programmable network device ‘powered by a sandboxing operating system’ – the *Vasell* reference advanced in the Petition is cumulative of the *Shatzkamer* reference applied during prosecution.” *See, e.g.,*

Req., 5 (original emphasis). PO's argument fails because the Examiner never asserted that *Shatzkamer* disclosed the sandboxing operating system limitation.

**1. *Vasell* as Applied in the Petition is Not Cumulative of
Shatzkamer as Applied During the Parent '871 Prosecution
History and the '095 Prosecution History**

Specifically, during prosecution of the application that led to the parent '871 Patent⁴, the Examiner – which at this time was the same Examiner that had examined the grandparent '624 Patent – rejected the '871 Patent claims as being obvious over *Pentikousis*⁵ in view of *Narayanan*⁶ and further in view of *Shatzkamer*⁷. EX1006, 136-140; *see also id.* at 120-121. The examiner cited *Narayanan* for disclosing that “network devices can employ sandboxing techniques (aka sandboxing OS) to execute applications in a dedicated and

⁴ The Request is silent regarding the highly relevant prosecution history of the parent '871 Patent. *See* Req. 1, 3-38.

⁵ *Pentikousis* is K. Pentikousis, et al., “MobileFlow: Toward Software-Defined Mobile Networks”, published in IEEE Communications Magazine, July 2013 (EX1085). EX1006, 136.

⁶ *Narayanan* is U.S. Patent Publication No. 2013/0223442 (EX1081).

⁷ *Shatzkamer* is U.S. Patent Publication No. 2014/0317293 (EX2001).

protected environment [0043]”, and “[i]t would be easily apparent that cloud devices such as SDN controllers can also employ sandboxing techniques to reap the same benefits.” EX1002, 136-138; EX1081, [0043].

Further, the examiner cited *Shatzkamer* for disclosing the “**application management portal**”, “**application repository**”⁸, and “verifies authenticity of the upgrades...” limitations of the ’871 Patent claims, and “it would have been obvious ... to modify *Pentikousis-Narayanan* to include an **application marketplace** and an **application management portal** as taught by Shatzkamer, because a standardized web-based app store portal enables a ‘point-and-click’ deployment of virtual network functions, thereby automating the complex tasks of commissioning, capacity planning and management of virtualized network services [Shatzkamer 0001,0004].” EX1006, 113-114; *see also id.* at 120-121.

⁸ In this Opposition, Petitioner uses the same color scheme that it used in the Petition to annotate the same elements in the ’095 Patent and the prior art. *See, e.g.,* Petition at 1-2.

The Applicant's only response to these obviousness rejections was to argue that the primary reference *Pentikousis* was not prior art. EX1006, 113-114.⁹ In doing so, the Applicant did not object to the Examiner's findings that *Narayanan* disclosed the "sandboxing operating system" limitation, and that *Shatzhamer* disclosed the "application management portal", "application repository", and "verifies authenticity of the upgrades..." limitations, of the '871 Patent claims. *Id.*; EX1006, 136-140, 120-121. Subsequently, a new Examiner allowed the '871 Patent claims after Applicant submitted a terminal disclaimer over the grandparent '624 Patent without any further discussion, application, or comment about any of the prior art of record. EX1006, 2-3, 12-16, 32, 62-63, 80-87, 95.

Then, during prosecution of the application that led to the '095 Patent, the new Examiner, without issuing a single prior art rejection, allowed the claims after Applicant submitted a terminal disclaimer over the parent '871 Patent and the grandparent '624 Patent, and identified the combination of all of the recited claim

⁹ The Applicant's Remarks in this same response confirm that the concurrently-filed claim amendments were solely to address the Examiner's "claim objections", "claim interpretation – contingent clauses not evaluated", and §§112(a), 112(b) and 112(f) rejections. EX1006, 111-112, 105-110, 118-135.

elements of '095 Patent claim 1 under "Allowable Subject Matter" in a Notice of Allowance. EX1002, 27-35, 59-63.

Thus, Patent Owner's § 325(d) arguments that *Vasell* is cumulative of *Shatzkamer* is without factual support. Neither of the examiners in the parent '871 Prosecution History nor in the '095 Prosecution History ever asserted that *Shatzkamer* discloses the network/cloud devices being "powered by a sandboxing operating system" claim limitation. Instead, the parent '871 Examiner asserted that the "sandboxing operating system" limitation is disclosed by *Narayanan*. And, the Applicant never argued that the "sandboxing operating system" limitation distinguished any prior art of record. Moreover, contrary to PO's assertion, the "sandboxing operating system" limitation clearly was **not** "the limitation upon which allowance [of the parent '871 Patent, nor the '095 Patent, claims] was based", **nor** was it "critical to the allowance of [the parent '871 nor '095] patent." Req. 5, 25.

**2. *Vasell* as Applied in the Petition is Not Cumulative of
Shatzhamer as Applied During the Grandparent '624
Prosecution History**

In the Request, with respect to prosecution of the parent '624 Patent, Patent Owner makes the same faulty argument that the *Vasell* reference is cumulative of the *Shatzhamer* reference based on the faulty premise that the Examiner asserted that *Shatzhamer* discloses the sandboxing operating system limitation. Req. 4-5,

20-21, 34. Specifically, during the parent '624 Prosecution, the Examiner found that *Li* (EX1005, 371-376) in view of *OpenFlow* (EX2002) disclosed all of the “programmable network device” and “programmable cloud device” limitations recited in claim 1, and found that, *Shatzkamer* discloses the “[application management portal](#)” and “[infrastructure application market place](#)” limitations. EX1005, 327-332; *see also id.* at 303, 306-307. The Examiner asserted that “it would have been obvious to modify the software defined cellular network of *Li* that utilizes the OpenFlow protocol (*Li*-OpenFlow), to include an [application marketplace](#) and an [application management portal](#) as taught by *Shatzkamer*, because a standardized web-based app store portal enables a ‘point-and-click’ deployment of third-party virtual network functions, thereby automating the complex tasks of commissioning, capacity planning and management of virtualized network services [*Shatzkamer* 0001,0004].” EX1005, 329-330.

Moreover, especially when the parent '624 Prosecution Examiner's subsequent Reasons for Allowance (reproduced and discussed below) are properly analyzed in light of the Examiner's prior claim rejections applying *Li* in view of *OpenFlow* (for all of the “programmable network device” and “programmable cloud device” limitations) in view of *Shatzkamer* (for the “application management portal” and “infrastructure application market place” limitations) (EX1005, 327-332, 303, 306-307), and in light of the same Examiner's subsequent claim

rejections of the parent '871 Patent claims (*see* §III.B above), it is clear that the '624 Patent Examiner did not assert that *Shatzhamer* discloses the “sandboxing operating system” limitation. EX1005, 438. Thus, like the prosecution histories of the '095 Patent and the '871 Patent, during prosecution of the parent '624 Patent, the Examiner did not assert that *Shatzkamer* discloses the “sandboxing operating system” limitation (nor did the Applicant make arguments distinguishing the “sandboxing operating system” limitation from *Shatzkamer*'s disclosure), and therefore there is no factual support for Patent Owner's argument that *Vasell*, as applied in the Petition, is cumulative of *Shatzkamer*, as applied during prosecution for the “sandboxing operating system” limitation.

Likewise, PO's assertion that “the Examiner emphasized the importance of the “sandboxing operating system” limitation in his reasons for allowance...” is without factual support. Req. 20 (original emphasis). For example, the chart below demonstrates that it was the PO that added the underlining to the examiner's notice of allowance (*see* left panel) as compared to the actual notice of allowance where the examiner listed several limitations, and did not emphasize the importance of any limitation over another limitation (*see* right panel):

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Patent Owner’s Misleading Representation of the Examiner’s Reasons for Allowance (Req. 20-21)	Examiner’s Reasons for Allowance (EX2005, 468)
provided a clear rationale for the Examiner’s decision to allow the case. In fact, the Examiner emphasized the importance of the “<u>sandboxing operating system</u>” limitation in his reasons for allowance, which provided as follows: The following is an examiner’s statement of reasons for allowance: The currently amended claims recite features that are not disclosed or suggested by the prior art of record. For instance, the prior art does not disclose forming distributed applications between a network application hosted by a network device at the edge of the wireless data network (e.g. base station or eNodeB) and a network application hosted by a cloud device in the core of the wireless data network (e.g. MME, SGW, PGW), wherein the network devices are <u>powered by a sandboxing OS that facilitates deploying the applications in a hardware-independent manner</u> and facilitates hot upgrades of the applications, wherein devices verify authenticity and integrity of the deployed applications based on the security keys assigned to the applications. Even though the Shatzkamer reference discloses an application repository that stores certified virtual network functions for deployment on physical machines via a web-based portal, <u>Shatzkamer does not suggest</u> storing and <u>provisioning distributed applications as claimed</u>. Therefore, the prior art of record does not disclose or suggest the subject matter presented in the independent claims as whole. <i>Id.</i>, 468 (emphasis added).	<i>Reasons for Allowance</i> 6. The following is an examiner’s statement of reasons for allowance: The currently amended claims recite features that are not disclosed or suggested by the prior art of record. For instance, the prior art does not disclose forming distributed applications between a network application hosted by a network device at the edge of the wireless data network (e.g. base station or eNodeB) and a network application hosted by a cloud device in the core of the wireless data network (e.g. MME, SGW, PGW), wherein the network devices are powered by a sandboxing OS that facilitates deploying the applications in a hardware-independent manner and facilitates hot upgrades of the applications, wherein devices verify authenticity and integrity of the deployed applications based on the security keys assigned to the applications. Even though the Shatzkamer reference discloses an application repository that stores certified virtual network functions for deployment on physical machines via a web-based portal, Shatzkamer does not suggest storing and provisioning distributed applications as claimed. Therefore, the prior art of record does not disclose or suggest the subject matter presented in the independent claims as whole.

Req., 20-21 (original emphasis); EX1005, 468. Accordingly, because the *Vasell* reference, as applied in the Petition, is **not** cumulative of the *Shatzkamer* reference as applied during prosecution of the grandparent ’624 Patent (nor as applied during the respective prosecutions of the parent ’871 and ’095 Patents), prong 1 of the *Advanced Bionics* framework is **not** satisfied, and *Becton Dickinson* factors (a)-(d) do **not** weigh in favor of the Board exercising discretion under § 325(d).

C. The Examiners Materially Erred In Prosecuting the Parent ’871 Patent and the ’095 Patent

As explained in the precedential *Advanced Bionics* decision, the § 325(d) analysis proceeds to prong two of the framework “**if** either condition of first part of the framework is satisfied”, *i.e.*, **if** “the same or substantially the same art previously was presented to the Office or [**if**] the same or substantially the same

arguments previously were presented to the Office.” *Advanced Bionics*, IPR2019-01469, Paper 8 at 8-9. Here, as explained in § III.B above, prong 1 of the *Advanced Bionics* framework is **not** satisfied, and analysis under prong 2 is **not** warranted, because the *Vasell* reference, as applied in the Petition, is **not** cumulative of the *Shatzhamer* reference as applied during the respective prosecutions of the grandparent '624 Patent, parent '871 Patent, and '095 Patent.

However, for completeness, Petitioner further demonstrates that the examiners materially erred in prosecuting the parent '871 Patent and the '095 Patent. As explained in *Advanced Bionics*:

If, after review of [*Becton Dickinson*] factors (a), (b), and (d), it is determined that the same or substantially the same art or arguments previously were presented to the Office, then [*Becton Dickinson*] factors (c), (e), and (f) relate to whether the petitioner has demonstrated a material error by the Office. Factor (c) focuses on the record developed by the Office in previously reviewing the art or arguments. It informs, therefore, the petitioner's showing under factors (e) and (f), which focus on the petitioner's evidence of previous Office error regardless of the context in which the same or substantially the same art or arguments were previously presented. For example, if the record of the Office's previous consideration of the art is not well developed or silent, then a petitioner may show the Office erred by overlooking something persuasive under factors (e) and (f).

Advanced Bionics, IPR2019-01469, Paper 8 at 10-11.

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Here, to argue that allowance of the grandparent '624 Patent claims and the parent '095 Patent claims rose and fell based on the claims' recitation of the "sandboxing operating system" limitation, and that "the Examiner expressly found that this ["sandboxing operating system" limitation] was absent from Shatzkamer", PO downplays differences between the parent '624 Patent claims and the '095 Patent claims. Req., 21-25. Indeed, at pages 22-24 of the Request, PO provides a "comparison chart" between the language of the grandparent '624 Patent claims and the language of the '095 Patent claims, and asserts that "the claims of the '095 Patent substantially track those of the '624 Patent with the primary exception being that the limitation reciting 'unified capabilities' that use 'a plurality of application programming interfaces (APIs)' from the '624 Patent has been removed in the '095 Patent." Req. 22-24.

However, during the respective prosecutions of the parent '871 Patent and the '095 Patent, the Applicant sought a broader claim scope than allowed in the grandparent '624 Patent by removing several claim limitations. For example, the excerpt from PO's comparison chart below highlights in yellow several claim limitations from Claim 1 of the '624 Patent that are not recited in the Claim 1 of the '095 Patent:

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'095 Patent - Claim 1	'624 Patent - Claim 1
1. A system for processing data packets in a network, the system comprising:	1. A system for processing data packets in a mobile data wireless network, the system comprising:
a programmable network device hosting a plurality of first network applications;	a programmable network device hosting a plurality of first network applications and located at a wireless edge of the mobile data wireless network;
a programmable cloud device hosting a plurality of second network applications;	a programmable cloud device hosting a plurality of second network applications and located in a core of the mobile data wireless network;

Id.

The highlighted differences in the above comparison chart excerpt are material to Prong 2 of the *Advanced Bionics* analysis. Specifically, under *Advanced Bionics* prong 2, and *Becton Dickinson* factors (c), (e)-(f), there was material error in the respective prosecutions leading to the issuance of the parent '871 Patent and the '095 Patent at least because none of the IPR prior art was considered by the Office and because, as detailed in the Petition and herein, the merits of the Petition, which applies the Challenged Claims to the combined teachings of these overlooked IPR references, is particularly strong.

Moreover, the original examiner in the parent '871 Prosecution History erred by relying on a reference (*Pentikousis*) in prior art rejections whose publication date (July 2013) was after the claimed priority date (June 13, 2013) of the application that led to the '871 Patent, despite identifying and acknowledging this

priority claim in the same Office Action and despite having examined the grandparent '624 Patent, and without explaining whether reliance on the intervening *Pentikousis* reference was proper because, for example, the Examiner found that the claims were not supported by the priority provisional application (as found for the specification of the '871 Patent). EX1006, 117, 126-135 (§§ 112(a) and 112(b) rejections of the claims), 135-148 (§ 103(a) rejections relying on *Pentikousis* as the primary reference). The Applicant's only response to these obviousness rejections was to argue that the primary reference *Pentikousis* was not prior art. EX1006, 113-114.

The original Examiner's error was compounded by the fact that a new Examiner took over prosecution after the original Examiner issued the Office Action relying on the intervening *Pentikousis* reference for all prior art rejections and Applicant traversed all the *Pentikousis*-based prior art rejections. *Id.*; EX1006, 115-151 (examiner R. Krishnan), 82 (identifying "[t]his case has been reassigned to a new Examiner"), 80-86 (examiner B. Higa). Then, the new Examiner erred by summarily withdrawing all of the original examiner's prior art rejections and § 112 rejections, and allowing the claims after Applicant submitted a terminal disclaimer over the grandparent '624 Patent (with its narrower claims relative to the parent '871 Patent claims), without any further discussion, application, or comment about any prior art or about any written description support (whether in the claimed

priority provisional application or in the patent specification). EX1006, 80-86, 32, 12-16. Indeed, although the new Examiner included a list of prior art made of record but not relied upon, the second Examiner still failed to identify *Vasell*, *Alves*, *Hall*, or *Rellermeyer*. EX1006, 87.

This same new examiner prosecuted the '095 Patent and, like he did when he took over examination of the '871 Patent, allowed the claims after Applicant submitted a terminal disclaimer over the grandparent '624 Patent (with its narrower claims relative to the parent '871 Patent claims) and the parent '871 Patent, without any prior art rejections, without any § 112 rejections, and by simply identifying the combination of all of the recited claim elements of '095 Patent claim 1 under "Allowable Subject Matter" in a Notice of Allowance. EX1002, 27-35, 59-63.

Thus, through commission of these errors, neither of the Examiners that examined the parent '871 Patent and '095 Patent were aware of the teachings of *Vasell*, *Alves*, *Hall*, and *Rellermeyer*.

The Office's manifest errors are material because, as detailed in the Petition, the merits of the Petition, which applies the Challenged Claims to the combined teachings of these overlooked IPR references, is particularly strong. *Vasell* (EX1004/EX1015/EX1016), like the parent '871 Patent and the '095 Patent, discloses a system for processing data packets having devices spread across the

Internet, called a “service gateway system.” Petition, 42-44. *Vasell* discloses a “network device” called a “service platform server,” and a “cloud device,” called “service provider equipment” or a “network operator server”, where, on each device, “sandboxing” is achieved including through an operating system (“OS”) that “must have fairly strong resource-control and protection mechanisms to ensure application integrity” **and** a JVM hosted thereon. Petition, 44-49, 53-57. *Vasell* also discloses a plurality of distributed software applications, called “service applications”, each distributed service application having a component (“portion”) installed on a network device and a component (“portion”) installed on a cloud device (and each implementing a service for end users). Petition, 44-53. And, *Vasell* discloses a management service having an external interface to manage the lifecycle of the distributed applications and manage upgrades of the components of the distributed applications. Petition, 56-57, 60-64. As further detailed in the Petition, technical details that were intended to implement *Vasell*’s teachings were described in each of the published references cited in the IPR Grounds – *Alves* (EX1008) (*e.g.*, cloud implementations, cloud-based application repository access), *Hall* (EX1009) (*e.g.*, using standardized digital signatures to improve security of distributed application components), and *Rellermeyer* (EX1011) (*e.g.*, management software monitoring and controlling load expansion/contraction across multiple cloud servers) – and, accordingly, a POSITA would naturally combine the

teachings in these references together, and their combined teachings disclose each limitation recited in the Challenged Claims. Petition, 39-46, 51-52, 56-57, 61-62, 63-65, 66-67. Accordingly, under *Advanced Bionics* prong 2, and *Becton Dickinson* factors (c), (e) and (f), there was material error in the respective prosecutions leading to the issuance of the parent '871 and '095 Patents including because none of this IPR prior art, and their respective, highly relevant teachings, was considered by the Office.

For at least the above reasons, the Director should readily dispense with Patent Owner's § 325(d) arguments, and take up the merits of the *Vasell*, *Alves*, *Hall*, and *Rellermeyer* prior art by instituting this IPR.

IV. THE DIRECTOR SHOULD NOT EXERCISE DISCRETION UNDER OTHER RELEVANT FACTORS

A. The Petition is Particularly Strong

Outside of its faulty assertion for the “sandboxing operating system” limitation, Patent Owner's Request is silent on the Petition's merits. For that reason alone, this factor should weigh against discretionary denial. *Samsung Electronics Co., Ltd. v. Clear Imaging Research, LLC*, IPR2020-01401, Paper 12 at 23 (PTAB Feb. 17, 2021) (encouraging parties to “point out, as part of the factor-based analysis, particular ‘strengths or weaknesses’ to aid the Board in deciding whether the merits tip the balance one way or another.”). But considering

the Petition's merits, the Director will see that this factor strongly weighs against discretionary denial. In particular, Petitioner is likely to prevail because *Vasell's* architecture and methods are foundational concepts that were eventually standardized under OSGi, and technical details that were intended to implement *Vasell's* foundational teachings are described in each of the published references cited in the IPR Grounds – *Alves* (EX1008), *Hall* (EX1009) and *Rellermeyer* (EX1011).

As detailed in the Petition, *Vasell* (EX1004/EX1015/EX1016), like the '871 Patent, discloses a system for processing data packets having devices spread across the Internet, called a "service gateway system." Petition, 42-44. *Vasell* discloses a "network device" called a "service platform server," and a "cloud device," called "service provider equipment" or a "network operator server", where, on each device, "sandboxing" is achieved including through an operating system ("OS") that "must have fairly strong resource-control and protection mechanisms to ensure application integrity" **and** a JVM hosted thereon. Petition, 44-49, 53-57. *Vasell* also discloses a plurality of distributed software applications, called "service applications", each distributed service application having a component ("portion") installed on a network device and a component ("portion") installed on a cloud device (and each implementing a service for end users). Petition, 44-53. And, *Vasell* discloses a management service having an external interface to manage the

lifecycle of the distributed applications and manage upgrades of the components of the distributed applications. Petition, 56-57, 60-64. As further detailed in the Petition, because technical details that were intended to implement *Vasell*'s teachings were described in each of the published references cited in the IPR Grounds – *Alves* (e.g., cloud implementations, cloud-based application repository access), *Hall* (e.g., using standardized digital signatures to improve security of distributed application components) and *Rellermeyer* (e.g., management software monitoring and controlling load expansion/contraction across multiple cloud servers) – the motivation for a POSITA to modify *Vasell*'s teachings, to include the features described in these references for their intended purpose and to achieve predictable benefits with a reasonable expectation of success is demonstrated by the references themselves. Petition, 39-46, 51-52, 56-57, 61-62, 63-65, 66-67. As detailed in the Petition, the naturally combined teachings of *Vasell*, *Alves*, *Hall* and *Rellermeyer* disclose each limitation recited in the Challenged Claims. *Id.*

Patent Owner's allegation that Petitioner "attempts to pass off a fabricated version Figure 2 of *Vasell*" (Req. 2, 42-43) is belied by the fact that "Annotated FIG. 2" (as it is referred to in the Petition) is annotated accurately to *Vasell*'s disclosure, and annotated accurately to the particular disclosed embodiments of *Vasell* that are quoted, cited and relied on in the Petition, and before and after the annotated figure in the Petition's summary of *Vasell*'s disclosure and detailed

element-by element application of the claims onto *Vasell*'s disclosure. *See, e.g.*, Petition, 25-26, 42-43 (*citing, e.g.*, EX1004 (*Vasell* Patent), 6:62-7:6; EX1016 (*Vasell* 2nd Provisional) at FIG. 2 (illustrating the same “via Internet” connections disclosed in words in the *Vasell* Patent and annotated in the Petition as part of Annotated FIG. 2).

For example, contrary to Patent Owner's allegations, on pages 25-26 of the Petition and again on pages 42-43 of the Petition (reproduced below with relevant aspects highlighted), Petitioner specifically identified that “Annotated FIG. 2” included annotations for the particular disclosed embodiments of *Vasell* that are quoted, cited and relied on in the Petition, including annotations for *Vasell*'s disclosure that “**service platform server 22** may be connected to the **network operator server 24** via the Internet” and that “the **network operator server 24** will be connected to at least one service provider equipment 34 via ... Internet 26” (EX1004, 6:62-7:6; EX1016, FIG. 2):

packets in a network). The service gateway system is shown in Vasell's Annotated Figure 2 (below), which includes hardware: (1) a "service platform server 22" "connected to the local area network 10" and connected to (2) a "network operator server 24 via the Internet", which is connected to (3) a plurality of service provider equipment 34 "via... Internet 26":

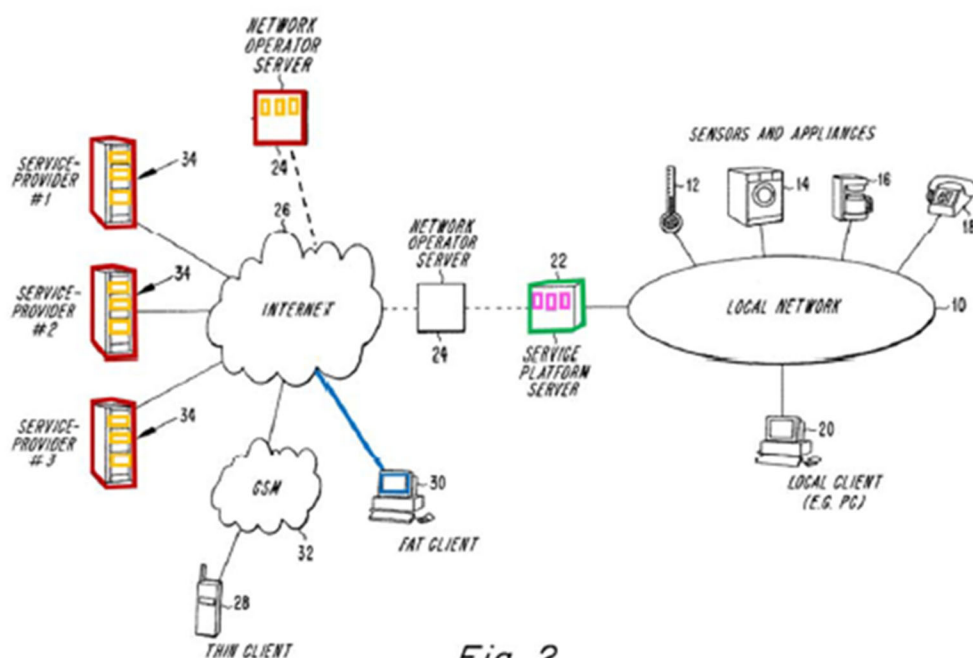


Fig. 2

EX1004, 4:31-47, 5:61-6:20, 6:62-7:6, 7:12-18; EX1016, 4, 6-9, FIGS. 2, 5;
EX1003, ¶¶400-401.

See, e.g., Petition, § VII.A.1 (pp. 25-26), § VII.A.6 (pp. 42-43) (reproduced and highlighted above)¹⁰. Additionally, for example, on pages 26-27 of the Petition and again on pages 43-44 of the Petition, Petitioner specifically identified that “Annotated FIG. 2” also included annotations for *Vasell*’s disclosure of “a plurality of **service applications** (each including a plurality of **distributed** software components)” and where “each component of a **service application** is respectively hosted on a JVM running on the respective OS of the **service platform server**, the **network operator server(s)**, and the **service provider equipment**.” Petition, 26-27, 4-44 (EX1004 and EX1016 citations omitted).

Accordingly, Petitioner’s Annotated FIG. 2, which is annotated accurately to the particular disclosed embodiments of *Vasell* that are quoted, cited and relied on in the Petition (including before and after the annotated figure in the Petition), does not provide a basis for discretionary denial.

Moreover, contrary to PO’s arguments in the Request, *Vasell*’s “sandboxing operating system” disclosure is **not** “limited to a [JVM] ‘runtime environment’” as

¹⁰ Petitioner acknowledges that, in the same way that it did on pages 4-5, 25-26 and 42-43 of the Petition, it would have been clearer if Petitioner had again referred to the annotated figure as “Annotated FIG. 2” on page 18 of the Petition.

PO contends. *See* Req. 26-31, 32-37, 39-40, 43. Rather, as is clear from Petitioner's mapping of the "sandboxing operating system" limitation onto *Vasell's* disclosure in the Petition, *Vasell* does not merely disclose "sandboxing" achieved through a JVM, but rather **expressly discloses** "sandboxing" achieved through, on each server, an operating system ("OS") that "must have fairly strong resource-control and protection mechanisms to ensure application integrity" such that "errors in software developed by different service providers" cannot result in the "applications... interfer[ing] with one another" **and** a JVM hosted thereon. Petition, 53-54. Moreover the Petition clearly shows the precise *Vasell*-disclosed software onto which Petitioner maps the "sandboxing operating system" limitation, which is **not** merely a JVM as Patent Owner asserts in its Request, but rather includes the server's operating system ("OS") with its "fairly strong resource-control and protection mechanisms to ensure application integrity" **and** the JVM hosted thereon (as well as other specified software). Petition, 53-548; *see also id.* at 55.

Furthermore, contrary to PO's gamesmanship argument in the Request (Req. 1-2, 39-40), the fact that *Vasell's* disclosure maps onto both Petitioner's, and PO's, respective constructions of "sandboxing operating system" from the related litigation is self-evident from the Petition and from the Petition-cited claim construction briefs. Petition, 10-12, 53-56. As explained therein, the *Vasell*-

disclosed “operating system” that “must have fairly strong resource-control and protection mechanisms to ensure application integrity” – which the Petition identifies as part of *Vasell*’s disclosed “sandboxing operating system” (*see* Petition 53-56) – by definition would be understood by a POSITA to include a kernel (as its “central” or “core” component). *Id.*; EX1071, 7-8 (Petitioner: “Edge’s proposed construction does not help clarify for the factfinder what an ‘operating system’ is ... [n]umerous technical dictionaries define a kernel as the ‘central’ or ‘core’ part of an operating system ... [t]hus a POSITA would understand that a sandboxing operating system includes a kernel”); EX1070, 5-6 (Patent Owner: “‘operating system’ is a commonly used term and nothing in the specification or prosecution history ... justif[ies] Microsoft’s unneeded construction.”).

Patent Owner’s argument in related litigation (EX1070, 6) that the word kernel is “unneeded” in Petitioner’s construction because it is already well-understood to be part of an “operating system” belies its argument in its Request (Req. 1-2, 39-40) that somehow Petitioner had to include this “unneeded” word in the Petition or that *Vasell* had to include this “unneeded” word in its disclosure. Accordingly, Patent Owner’s allegations of “gamesmanship” for the “sandboxing operating system” limitation (Req. 1-2, 39-40) are meritless.

**B. Petitioner Followed Board Regulations and Guidance in the
“Common Practice” Situation of Pleading § 112(f) Indefiniteness**

**In the Related District Court Litigation Which is Barred by
Statute From Being Pled in an IPR**

Patent Owner's remaining "gamesmanship" allegations also fall flat as Petitioner followed existing Board regulations and guidance in the "common practice" situation where § 112(f) indefiniteness is pled in related district court litigation but is barred by statute from being pled in an IPR. *See, e.g., Target Corporation*, IPR2020-00904, Paper 11 at 11-13 (rejecting patent owner's request for discretionary denial where, "in the district court, Petitioner served ... constructions stating that [certain claim terms] are indefinite ..., but in this [IPR] proceeding Petitioner argued that [prior art] discloses the elements containing those terms", and noting that "Petitioner's alternative pleading before a district court is common practice, especially where it concerns issues outside the scope of *inter partes* review" like this one where 35 U.S.C. § 311(b) "explicitly precludes Petitioner from asserting indefiniteness as a ground to seek cancellation of claims in an *inter partes* review."); *see also, e.g., Cambridge Mobile Telematics*, IPR2024-00966, Paper 12 at 6-9 (noting that, "as a clarification, our rules do not necessarily prohibit petitioners from taking inconsistent claim construction positions before the Board and a district court", but also noting that "[w]here claim language *may* be construed according to 35 U.S.C. §112(f), a petitioner *must*

provide a construction.”) *citing 10x Genomics, Inc. v. Pres. and Fellows of Harvard Coll.*, IPR2023-01299, Paper 15 at 2, 8 (PTAB Mar. 14, 2024).

Here, just as existing Board regulations and guidance require¹¹, in the Petition, Petitioner identified the parties' competing claim construction positions to the Board (Petition, 10-13 (*citing* EX1070; EX1071)), explained to the Board that no specific construction of any claim term is required because the prior art in the IPR Grounds meets each of the claim terms under any reasonable construction (Petition, 10-11), explicitly and alternatively provided the specific portions of the '095 Patent specification that Patent Owner identified as describing the structure corresponding to each function of each claim term that Patent Owner argued was governed by §112(f) in the related litigation (*id.* at 10-13 (*citing* EX1070; EX1071)), and also showed how the prior art disclosed the same, or an equivalent, structure (Petition, 52-53, 54-55, 58-59, 63-64, 66, 72-74). *See, e.g., Cambridge*

¹¹ In addition to the exemplary decisions noted above, Petitioner followed the Board regulations in 37 C.F.R. § 42.104(b)(3) and Board guidance in the Consolidated Trial Practice Guide (Nov. 2019), available at: <https://www.uspto.gov/sites/default/files/documents/tpgnov.pdf?MURL=TrialPracticeGuideConsolidated>.

Mobile, IPR2024-00966, Paper 12 at 6-9; *Target Corporation*, IPR2020-00904, Paper 11 at 11-13.

C. Patent Owner's Allegations of Overuse of Expert Testimony are Based on Its Mischaracterizations of *Vasell*'s Disclosure and the IPR Petition

Patent Owner's allegations of overuse of expert testimony are based on Patent Owner's mischaracterizations of *Vasell*'s disclosure and of the Petition's mapping of the "sandboxing operating system" limitation onto such disclosure. Req. 1-2, 43-44; *see also* Req. 39-40.

As discussed in § IV.A above, PO's allegation that the Petition "relies on expert testimony to fill gaps in the prior art" – which is based on the same assertion that "Vasell merely discloses "*a single local operating environment* such as a Java Virtual Machine (JVM), or the like" – is meritless. *See* § IV.A *supra*; Petition, 57-59. Moreover, as confirmed by the Petition, *Vasell*'s disclosure – and not Petitioner's expert testimony – is what Petitioner maps the "sandboxing operating system" term onto. *See* Petition, 53-54 *citing Vasell* (EX1016, 4, 6-9, FIGS. 2, 5; EX1004, 3:18-23, 18:27-30, 12:21-29, 13:64-14:7, 15:41-46, 17:40-45, 18:9-19, 18:23-30, 19:42-43, 19:63-20:2, 22:8-18) and EX1003 (expert) at ¶¶ 456-462, 464 (which only cite to, and include excerpts from, the identical citations in *Vasell* as the Petition); *cf. Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 9 at 14-17 (Aug. 24, 2022) (designated precedential: February 10, 2023); *Cisco Sys., Inc. v.*

C-Cation Techs., LLC, IPR2014-00454, Paper 12 at 7-10 (August 29, 2014)

(designated informative).¹²

Obviousness grounds are evaluated from the perspective of a POSITA. *KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 417 (2007) (“If ***a person of ordinary skill*** can implement a predictable variation, §103 likely bars its patentability.”), 418 (“[I]t can be important to identify a reason that would have prompted ***a person of ordinary skill*** in the relevant field to combine the elements in the way the claimed new invention does.”). Here, again in accordance with Federal Circuit precedent, Petitioner’s expert provides his perspective on the obviousness of certain features

¹² The remaining paragraphs on pages 54-57 of the Petition identify how Vasell discloses the “sandboxing operating system” functions recited in elements [1.4] and [1.5] and, to the extent that Patent Owner argues or the Board finds that element [1.4], and/or element [1.5], is governed by § 112(f), identify how and why a POSITA would have understood that “Vasell’s structure to carry out the [1.4]-recited functions is the PO-indicated structure in the ’095 Patent or equivalent thereof”, and “Vasell’s disclosed structure to perform this [[1.5]-recited] function is the PO-indicated structure in the ’095 Patent (§V.C) or equivalent thereof.” Petition, 54-55, 55-57.

claimed by the '095 Patent and the obviousness of the combination of certain references, including, in the alternative, where PO may argue, and/or the Board may find, that certain claim limitations are governed by § 112(f), with testimony supported by the required disclosure of references in accordance with 37 CFR § 42.65(a) and *Xerox*, IPR2022-00624, Paper 9 (precedential). *See, e.g.*, Petition, 54-57; EX1003, Section IX.B.1 (element [1.4] (including the “sandboxing operating system” limitation), ¶¶456-462, 464 (*cited in* Petition, 54-55), ¶¶462, 465-466, 470-473, 132-136, 468-469, 474 (*cited in* Petition, 54-55); EX1003, Section IX.B.1 (element [1.5] (including the “sandboxing operating system” limitation), ¶¶477-490 (*cited in* Petition, 55-57).

Moreover, the Federal Circuit has made it clear that attorney argument is not evidence. *Icon Health & Fitness, Inc. v. Strava, Inc.*, 849 F.3d 1034, 1043 (Fed. Cir. 2017) (“Attorney argument is not evidence.”) (citing *Gemtron Corp. v. Saint-Gobain Corp.*, 572 F.3d 1371, 1380 (Fed. Cir. 2009) (“[U]nsworn attorney argument . . . is not evidence and cannot rebut . . . other admitted evidence . . .”)); *see also Elbit Sys. Of Am., LLC, v. Thales Visionix, Inc.*, 881 F.3d 1354, 1359 (Fed. Cir. 2018) (“Elbit fails to present any evidence supporting this contention beyond attorney argument . . . and ‘[a]ttorney argument is not evidence’ and cannot rebut other admitted evidence.”). The Board recently confirmed this: “It is well settled that mere attorney argument unsupported by factual evidence is entitled no

probative value.” *PLR Worldwide Sales LTD. v. Flip Phone Games, Inc.*, IPR2024-00209, Paper 28 at 32 (April 24, 2025). Because attorney argument is not evidence, expert testimony, such as Petitioner’s expert’s declaration with citations to underlying factual support underlying the opinions therein, is essential to properly support IPR claim construction and obviousness positions. His declaration is appropriately utilized to explain complicated subject matter and provide detail regarding how a POSITA would have understood the technical disclosures of the ’871 Patent and the prior art references.

Thus, the Petition is properly supported by expert testimony, and both the Petition and the Expert Declaration cite the underlying factual support.

D. Settled Expectations

This consideration weighs against discretionary denial because Petitioner’s settled expectations are greater than PO’s settled expectations, if any.

1. Patent Owner Has Not Developed Strong Settled Expectations as to the ’095 Patent

Patent Owner argues that the recent decision in *iRhythm* supports discretionary denial but fails to identify the underlying factual basis supporting the Director’s conclusion in *iRhythm*, and how the underlying factual basis of *iRhythm* relates to the facts of the present case. Req. 44-46. As a threshold matter, the *iRhythm* decision was not offered to impose a *de facto* requirement for petitioners

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to challenge patents as they issue or are cited. Moreover, here, material differences between the grandparent '624 Patent claims and the claims of its children and grandchildren (including the parent '871 and '095 Patent claims), PO's recent formation as a company (March 27, 2023), the fact that the '095 Patent was recently acquired by PO (April 2023), the fact that the '095 Patent has "not been in force for a significant period of time" (having issued in January 2021), and PO's filing of a non-publication request during prosecution of the '095 Patent, confirm that Patent Owner "has not developed strong settled expectations that favor discretionary denial" here. *See, e.g., Cambridge Industries*, IPR2025-00434, -00436, -00437, Paper 11 at 2-3.

In *iRhythm*, the patent owner established an expectation between the parties with evidence showing that a former engineer and founder of the petitioner was particularly focused on the IP landscape related to petitioner iRhythm's heartrate monitor technology, specifically identifying petitioner iRhythm's IP searches focused on patents and pending applications, detailed review of the prior art including analysis of specific claims, and identifying challenged patents on IDSs filed in its own pending applications. *iRhythm Technologies Inc. v. Welch Allyn Inc.*, IPR2025-00363, Paper 7, at 29-31 (April 18, 2025) *citing* EX1074. Specifically, in *iRhythm*, the patent owner argued that the petitioner's founder was "particularly focused on patent searches." *iRhythm*, Paper 7 at 30. The petitioner's founder is

quoted as saying, “[T]o figure out if people had done this before[,] we conducted IP searches. Our focus was on patents that had already been issued as well as pending patent applications.” *Id.* (quoting EX1074 at 232). The petitioner’s founder even stated that he “revisited the team’s early IP assessment” and “dived much more deeply in the analysis of specific claims.” *Id.* (quoting EX1074 at 233). The Director discretionarily denied review of the five IPRs because the application that ultimately issued as the oldest patent in the family was cited in an information disclosure statement for one of the petitioner’s patent applications. *iRhythm*, Paper 10 at 3.

iRhythm is distinguishable from the facts here because: (1) the Applicant identified an incorrect assignee on the face of the ’095 Patent (and this error persists) (EX1001,1; EX1002, 1-4, 25); (2) the ’095 Patent changed hands post-issuance (*see* EX1002, 3-12; EX1080; EX1082); (3) PO was only recently formed as a company (March 27, 2023) (*see* EX1079); (4) PO did not acquire the ’095 Patent until recently (April 20, 2023), and just three weeks after PO’s corporate formation (*id.*; EX1080); (5) the scope of the grandparent ’624 Patent claims and the ’095 Patent claims are different; (6) PO did not assert, and there is no evidence to suggest, that Petitioner was particularly focused on the patent landscape at the time that the grandparent ’624 Patent was identified by the examiner; and (7) PO

has not asserted that it has ever commercialized, asserted, marked, or licensed any of the patents that it acquired.

PO relies solely on the listing of the grandparent '624 Patent on the face of a U.S. patent that issued in December 2019 and is owned by Petitioner, and on a Notice of References cited accompanying an April 2019 Office Action during prosecution of this U.S. Patent. Req. 44-45; EX2006; EX2007. PO provides no evidence that the grandparent '624 Patent was relied upon or discussed by the examiner during prosecution of this U.S. Patent, or that Petitioner had any knowledge whatsoever of any child of the grandparent '624 Patent (including, *e.g.*, the '095 Patent). The law is well settled that the mere knowledge of a patent does not confer knowledge of infringement of the patent under the patent statute.

Amsted Industries Inc. v. Buckeye Steel Casting Co., 24 F.3d 178, 187 (Fed. Cir. 1994). The mere listing of the grandparent '624 Patent does not confer sufficient knowledge of the grandparent '624 Patent upon Petitioner to seek early review of this patent absent a claim of infringement, and does not confer any knowledge whatsoever of any children or grandchildren of the grandparent '624 Patent upon Petitioner (including of the '095 Patent).

Notably, PO has never alleged that Petitioner infringes the grandparent '624 Patent – the only patent that PO alleges Petitioner had notice of –, and declined to

assert the grandparent '624 Patent in the related litigation.¹³ Accordingly, even if the mere listing of the grandparent '624 Patent on a patent owned by Petitioner could confer knowledge of the grandparent '624 Patent upon Petitioner, the only settled expectations that could have come from such knowledge is that Patent Owner would never assert it against Petitioner.

Moreover, PO was not even formed as a company until recently (March 27, 2023), and PO acquired ownership of the grandparent '624 Patent three weeks later (on April 20, 2023) and, less than 10 months later, PO filed the related litigations against Petitioner. EX1079 (PO's Certificate of Formation dated March 27, 2023); EX1080 at 1 (assignment from inventor Pouya Taaghola to PO, effective April 20, 2023). In these circumstances, PO could not have begun developing any expectations until April **2023 at the earliest**. Thus, PO can have no settled expectations as to the non-invalidity of the '095 Patent.

¹³ This is not surprising given that, as discussed in § III.D above, there are material differences between the grandparent '624 Patent claims and the claims of any of its subsequently filed and issued child and grandchild patents (including the '095 Patent).

Furthermore, at the time that the grandparent '624 Patent was identified in the Microsoft patent application (April 3, 2019 (EX2007, 19)), the inventor Pouya Taaghol was the owner of the grandparent '624 Patent, not PO. Req. 44-45; EX1083, 1; EX1084, 1 (assignment from inventor Pouya Taaghol to Big Data Federation, Inc., effective November 7, 2019.) Unlike in *iRhythm*, PO does not allege that Microsoft had any particular focus on Mr. Taaghol's patents at the time.¹⁴ Further, the examiner may have identified the grandparent '624 Patent but did not apply or discuss the grandparent '624 Patent. EX2007, 17; *see id. generally*. And, ownership of the grandparent '624 Patent changed three (3) times after the grandparent '624 Patent was identified in the Microsoft patent application on April 3, 2019.¹⁵

¹⁴ Mr. Taaghol is one of the inventors of the grandparent '624 Patent, and the PO has not asserted that Mr. Taaghol commercialized, asserted, marked, or licensed the '624 Patent (or any of its child patents). Nor has PO asserted that Mr. Taaghol has any ownership interest in PO (*i.e.*, Edge Networking Systems).

¹⁵ The grandparent '624 Patent was assigned from inventor Pouya Taaghol to Big Data Federation, Inc. ("BDF") on November 7, 2019 (EX1084), then back to Mr. Taaghol on March 16, 2023 (EX1082), and then from Mr. Taaghol to the PO on

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Still further, Patent Owner's actions during prosecution of the grandparent '624 Patent, parent '871 Patent, and the '095 Patent here, including its filing of non-publication requests when it filed the respective applications that led to each of the later-issued child patents of the grandparent '624 Patent (including the '871 Patent, '095 Patent and '823 Patent), and which prevented any member of the public from having any knowledge of any such child applications until – at the absolute earliest – the respective issue dates of each such child patent (which is January 12, 2021 for the '095 Patent), are further evidence that even Patent Owner “has not developed strong settled expectations that favor discretionary denial.” EX1002, 88, 110 ('095 Patent); EX1006, 178, 269 ('871 Patent); EX1007, 6, 104 ('823 Patent); *Cambridge Industries*, IPR2025-00434, -00436, -00437, Paper 11 at 2-3 (Director finding that “Patent Owner has not developed strong settled expectations that favor discretionary denial as to ... patents” that “have not been in force for a significant period of time (issued in 2020, 2019, 2019).”).

Given the significant difference between the underlying factual basis supporting the Director's conclusion in *iRhythm* and the circumstances alleged by

April 20, 2023 (EX1080). The PO has not asserted that BDF commercialized, asserted, marked, or licensed the '624 Patent (or any of its child patents).

Patent Owner here (Req., 44-46), the decision by the Director in *iRhythm* does not support the contention by Patent Owner that any knowledge by Petitioner of the grandparent '624 Patent conveyed any knowledge whatsoever of any children or grandchildren of the grandparent '624 Patent (including the '095 Patent) prior to Patent Owner filing the complaint in the related litigation against Petitioner (asserting the child '871 Patent, '095 Patent, and '823 Patent) and such that there was a settled expectation between the parties as to the non-invalidity of the '095 Patent.

Here, PO has provided no evidence to establish that Petitioner had any knowledge of the '095 Patent until PO filed the related litigation, and has provided no evidence of a settled expectation among the parties that the '095 Patent was not invalid. To the contrary, the settled expectation among the parties was that Petitioner was not infringing any of the patents in this family by selling the accused products free from any claims of infringement until PO filed the related litigation against Petitioner (less than 10 months after acquiring the patents in this family) in which PO asserted claims of the child '871, '095 and '823 Patent that are materially different than the grandparent '624 Patent claims.

2. Petitioner's Settled Expectations Carry Greater Weight

To the extent that PO has settled expectations, Petitioner also has settled expectations. Specifically, not only has the '095 Patent lay dormant since its

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issuance in January 2021 and until PO filed the related litigation, but the patent statute permits IPRs to be filed any number of years after a patent issues, as long as the IPR is filed before 1 year following service of a complaint for infringement.

PO has not asserted nor provided any evidence that the grandparent '624 Patent, the parent '871 Patent, the '095 Patent, nor the child '823 Patent, have ever been commercialized, asserted, marked, or licensed by itself (or by any prior owner) before the related litigation. The Director recently clarified that these are “considerations that weigh against a patent owner’s claim of settled expectations and bears on the Director’s discretion.” *Intel Corporation v. Proxense LLC*, IPR2025-00327, Paper 12 at 2-3 (PTAB June 26, 2025).

Also, it is a plain fact that the AIA does not restrict IPRs to “newer” patents; any patent over the age of nine months may be challenged. 35 U.S.C. § 311; *see also NHK Spring Co., Ltd. v. Intrix-Plex Techs., Inc.*, No. IPR2018-00752, Paper 8 at 19 (PTAB Sept. 12, 2018) (precedential) (“Patent Owner argues that Petitioner knew about the '841 patent for more than 10 years, yet provides no explanation for why it waited so long to file the Petition. ... We are not persuaded that this lapse in time favors denying review.”). Petitioners thus have settled expectations that IPRs can be brought in accordance with the AIA, and PO can have no expectation of avoiding an IPR during the lifetime of the grandparent '624 Patent (and beyond).

E. APA Considerations

Notwithstanding the foregoing, the Workload Memo (dated March 26, 2025) should not apply to the present Petition (filed February 17, 2025) because that would violate the Administrative Procedure Act (“APA”). 5 U.S.C. §§ 551–559. First, the Director lacks authority to “promulgate retroactive rules.” *Tafas v. Dudas*, 511 F. Supp. 2d 652, 666 (E.D. Va. 2007). Second, “general statements of policy” can only be applied prospectively. *Lincoln v. Vigil*, 508 U.S. 182, 197 (1993); 5 U.S.C. § 552(a)(2)(D)(ii). Third, the APA requires agencies to inform parties of the matters of “law asserted.” 5 U.S.C. § 554(b)(3). These violations are merely some examples that the Director should consider. Petitioners reserve the right to challenge the Workload Memo on other grounds including because it was adopted without notice-and-comment rulemaking.

V. CONCLUSION

The Director should deny Patent Owner’s request for discretionary denial of institution.

Respectfully submitted,

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Dated: July 15, 2025

CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24 *et seq.*, the undersigned certifies that this document complies with the type-volume limitations. This document contains 8,709 words as calculated by the “Word Count” feature of Microsoft Word 365, the word processing program used to create it.

Dated: July 15, 2025

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CERTIFICATION OF SERVICE ON PATENT OWNER

I hereby certify that on July 15, 2025, a copy of Petitioner's Opposition to Patent Owner's Request for Discretionary Denial was filed by filing this document through the PTACT's System as well as delivering a copy via electronic mail upon the following lead and backup counsel for Patent Owner:

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