

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PALO ALTO NETWORKS, INC.

Petitioner

v.

BT AMERICAS INC.

Patent Owner.

Case IPR2023-00889
Patent 7,895,641

PATENT OWNER'S SUR-REPLY

TABLE OF CONTENTS

I.	All Claims Involve a Potentially <i>Security</i> -Related Event.	1
A.	All Claim Terms Should Be Given Patentable Weight.	2
B.	A POSA Would Appreciate the Disconnect Between Identifying Pornographic Material and a Potentially Security-Related Event.	4
II.	Petitioner’s Latest Attempt to Justify the Introduction of Features from Chu Into Duvall Are Untimely and Incorrect.	7
A.	Petitioner’s New Motivation Improperly Extracts a Mere Temporal Suggestion.	8
B.	Making an On-the-Fly Trust/Do-Not-Trust Decision Would Hurt Duvall’s System—Not Improve It.	9
C.	The Newly Proposed Motivation Is Unrealistic.	11
III.	The Alleged Combination Would Not Analyze Post-Filtering <i>Residue</i>	12
A.	The Board Should Give Patentable Weight to the Term “Residue.”	13
B.	The Board Should Consider Duvall as a Whole When Determining What It Teaches a POSA.	15
C.	Petitioner’s Sleight of Hand in Reply II.C.2 Should Be Rejected.	16
1.	The Claims and Specification Indicate a Two-Part Analysis.	16
2.	Petitioner’s Misread of Duvall Discloses a Single Filter Database with Filters Acting Together in Concert, Not as Separate Analyses.	17
IV.	The Reply Still Does Not Establish that an Analyst System Would Be Present in the Combination.	19
V.	Petitioner’s New “Reasonable Capability” Arguments Are Legally Incorrect and Factually Unsupported.	20
VI.	Petitioner’s Attack on Claim 15 Is Contrary to Law.	23
VII.	Petitioner Fails to Meet Its Burden for Independent Claim 18.	24
VIII.	Petitioner Provides No Evidence Regarding Secondary Considerations.	25
IX.	Petitioner Cannot Eliminate the Limitation 1(b)/1(c) Temporal Requirement for Claim 6.	26

X. Petitioner Fails to Explain How Trcka Could Be Combined with Duvall-Chu.	
27	
XI. The Lack of a Proper Motivation for Modifying Duvall Dooms Duvall-Chu- Trcka-Ziese.	27
XII. Conclusion	28
WORD COUNT CERTIFICATION	29
CERTIFICATE OF SERVICE	30

LIST OF EXHIBITS

2001	Declaration of Wenke Lee
2002	Declaration of Bruce Schneier from IPR2019-01324
2003	Bruce Schneier's Wikipedia
2004	John Callas' Wikipedia
2005	Jeffay, et al., " <i>What TCP/IP Protocol Headers Can Tell Us About the Web</i> ," Proceedings of ACM SIGMETRICS 2001/Performance 2001 (June 2001)
2006	Stipulated Protective Order Confidentiality Agreement from Fortinet
2007	Deposition Transcript of Dr. Jeffay
2008	Bassham, et al, " <i>Threat Assessment of Malicious Code and External Attacks</i> ," NISTIR 4939, NIST (October 1992).
2009	Schneier, " <i>Counterpane and Managed Security Monitoring</i> ," Counterpane (April 2002)
2010	Markoff, " <i>Beyond Computers in Computer Security</i> ," The New York Times (April 2000)
2011	" <i>Counterpane Internet Security Delivers Industry's Most Comprehensive Managed Security Services</i> ," Help Net Security (August 2003)
2012	Woodie, " <i>Counterpane Brings OS/400 Into its Managed Security Fold</i> ," IT Jungle (March 2005)
2013	Pescatore, et al., " <i>2H01 Managed Security Service Provider Magic Quadrant</i> ", Gartner (February 2002)
2014	Hunt, et al., " <i>Market Overview: Managed Security Services</i> ," Giga Information Group (April 2001)

2015	Gonsalves, “ <i>Watchful Eyes – Outsourcing event-log monitoring saves health insurer money and provides early warnings on network intruders</i> ,” United Business Media
2016	Declaration of Wenke Lee in Support of Patent Owner’s Response
2017	Sturgeon, “ <i>BT snaps up Counterpane Internet Security</i> ,” CNET (October 2006)
2018	Excerpts of Deposition Transcript of Kevin Jeffay
2019	“The Shrinking Cost of a Megabit,” NCTA – The Internet & Television Association (March 2019)
2020	Curriculum Vitae of Wenke Lee, Ph.D.
2021	Joint Claim Construction Brief from <i>British Telecommunications plc et al. v. Palo Alto Networks, Inc.</i> , Case 1:22-cv-01538-CJB, dkt. 142.
2022	Supplemental Declaration of Wenke Lee in Support of Patent Owner’s Sur-Reply
2023	Daria Zhuravleva, “Most Common Spam Emails You Can Encounter in 2024,” May 8, 2022, available at https://selzy.com/en/blog/spam-email-examples/
2024	“The Worst Phishing Attacks in History,” January 05, 2023, available at https://www.graphus.ai/blog/worst-phishing-attacks-in-history/
2025	Micke Ahola, “The 7 most damaging phishing attacks of all time,” available at https://blog.usecure.io/famous-phishing-attacks
2026	Patchen Barss, “Ten indispensable technologies built by the pornography industry,” June 5, 2011, available at https://patchenbarss.com/2011/06/05/ten-indispensable-technologies-built-by-the-pornography-industry/

2027	Cezary Jan Strusiewicz, “5 Ways Porn Created the Modern World,” <i>Cracked</i> , December 11, 2010, available at https://www.cracked.com/article_18888_5-ways-porn-created-modern-world.html
2028	Doug Gross, “In the tech world, porn quietly leads the way,” <i>CNN</i> , April 23, 2010, available at https://edition.cnn.com/2010/TECH/04/23/porn.technology/

Petitioner’s expert failed to indicate where the relied-upon references taught certain allegedly present features—at least 20 times. Petitioner’s Reply does not rehabilitate its expert. Instead, it eliminates entire phrases from the claims, manufactures completely new motivations, and urges further strained readings of the art. Petitioner incorrectly links objectionable pornographic material with security concerns and ignores the claimed two-part analysis involving residue status data. In some instances, Petitioner’s Reply is inconsistent with the Petition and its district court position—and in others, the Reply is internally inconsistent. Petitioner’s overall approach lacks merit. The Board should find all claims patentable.

I. ALL CLAIMS INVOLVE A POTENTIALLY *SECURITY*-RELATED EVENT.

Claims 1 and 18 involve identifying/identified “potentially *security*-related events.” A person of ordinary skill in the art (POSA) would understand that, broadly speaking, this plain language positions the claims in the computer security world. A POSA would further understand Duvall is directed to an orthogonal issue with no practical bearing on the computer security world. Duvall is the wrong starting place for alleging obviousness.

Indeed, *security is never mentioned in the four corners of Duvall. This is undisputed.* The Board should neither ignore this express claim language (which

would constitute legal error), nor adopt Petitioner’s alleged linkage between pornography and security concerns (which lacks a sound factual basis).

A. All Claim Terms Should Be Given Patentable Weight.

Reply II.A offers no credible factual support for asserting that identifying “potentially security-related events” is broad enough to encompass Duvall’s monitoring for pornographic material. Instead, it intimates these phrases have no meaning whatsoever, disingenuously quoting PO’s expert for the proposition that “everything” can be security related.¹ EX2022, 7-8. According to Petitioner, then, the claims need only identify anything—effectively eliminating the above-quoted language.

Petitioner’s approach is contrary to law. All claim terms should be given patentable weight. *See Stumbo v. Eastman Outdoors, Inc.*, 508 F.3d 1358, 1362 (Fed. Cir. 2007); *see also Bicon Inc. v. Straumann Co.*, 441 F.3d 945, 950 (Fed. Cir. 2006).

¹ The Reply conflicts with the Joint Claim Construction Brief in the co-pending litigation. *See* EX2021, p. 49-54, 60-62. Petitioner agreed to construe “security-related events” as “attacks or intrusions against the computer network,” rather than as “potentially intrusive activity happening on a network” as it originally proposed. *Id.* There is no attack/intrusion in objectionable material, nor is it “against *the computer network*.”

Both experts agree additional context is needed to distinguish potentially security-related events from non-potentially security-related events. *See, e.g.*, EX1046, 179:14-15 (“You don’t say, wow, this is porn. You look at other contextual information to say is this reasonable thing to do?”), 180:14-19, 186:17-187:7, 188:10-12; EX2007, 29:14-16 (“[I]t depends on the context and it would certainly depend on the type of network....”), 29:20-30:2, 31:2-11. *See also* EX2022, 9-11.

Nor can Petitioner reasonably fault Patent Owner (“PO”) for (allegedly) failing to provide an explicit construction for these terms.² In IPRs, petitioners bear the burden of establishing unpatentability, and that burden never shifts. *In re Magnum Oil Tools Int’l, Ltd.*, 829 F. 3d 1364, 1375 (Fed. Cir. 2016). Regardless, Patent Owner’s Response (POR) at pages 7-9 clearly took issue with Petitioner urging this claim language either to be ignored altogether, or interpreted so broadly as to lack all meaning. Express claim language cannot be treated this way.

To be clear, Duvall does not disclose within its four corners anything having to do with identifying a potentially security-related event. Identifying pornographic or other objectionable material does not correspond with the features

² The Reply on page 2 complains PO “does not propose any construction” for these terms—but then criticizes PO’s “narrow interpretation.”

of claims 1 and 18. And there is no teaching or suggestion of the additional context needed to convert Duvall into a security monitoring system. *See* EX2022, 7-11. It would not have been obvious to modify Duvall to include this subject matter, given Duvall's distinct focus.

B. A POSA Would Appreciate the Disconnect Between Identifying Pornographic Material and a Potentially Security-Related Event.

The Reply cites Dr. Jeffay's Declaration at paragraphs 117-118 in attempting to establish a linkage between identifying pornographic material and identifying a potentially security-related event. But neither paragraph relates to the claim language at issue; instead, they relate to the claim 1 preamble.

Moreover, although Dr. Jeffay surely has a wealth of experience, he cannot reasonably opine on this linkage from a POSA's perspective at the time of the invention. Dr. Jeffay explained his experience is mostly on "the academic side" rather than "the industry side"—and his industry-side experience was just more academic-side "research collaborations." EX2007, 11:9-12:13. Dr. Jeffay was "just generally doing research to try and understand the nature of network traffic and trying to be able to characterize ... good traffic from bad or anomalous traffic." *Id.*, 24:8-15. In fact, Dr. Jeffay testified malware detection was not a problem academia thought even warranted research. *Id.*, 13:21-14-1.

If there were a pornography-security linkage, given his interest in distinguishing good-from-bad traffic, one would expect Dr. Jeffay to quantify the likelihood of porn being malicious, and identify whether porn was likely malicious more often than benign-appearing content. He did neither, instead admitting he conducted no analyses while being unable to cite others' research. *See id.*, 68:22-69-8; 67:5-9; 69:14-70:4.

Dr. Jeffay had no meaningful understanding of what was happening in industry at the time of the invention. For example, he had no understanding of how many managed security monitoring services were in the market (*id.*, 18:11-15)—or even whether they were common (*id.*, 19:5-14). Dr. Jeffay's lack of familiarity with the industry and academic bias away from actual commercial needs makes him unqualified to opine on what a POSA would have understood about computer security at the time of the invention.

Petitioner's Reply cites to Exhibits 1026 and 1030 for the assertion "it was common for computer viruses to use objectionable materials to lure users into downloading the virus." These citations contradict that assertion.

Exhibits 1026 and 1030 pertain to the Melissa Virus, which "lured users into downloading the virus" by sending an email with a header reading "Important Message From <name>" where the name was taken from an Outlook address book. EX1030, 4. That an attachment to the email contained pornographic sites is

irrelevant; the “lure” (the subject line) and the actual exploit (the macro in the attachment) would have worked just the same regardless of whether the attachment contained objectionable material. *See* EX2022, 12.

Meanwhile, in contrast with Dr. Jeffay’s unreliable and incorrect testimony, during cross-examination, PO’s expert, Dr. Lee, testified about what was happening in industry, with specific reference to pornographic websites. When asked about whether, in the 1990s, pornographic sites were susceptible to having malware, spyware, and viruses, Dr. Lee explained:

I clearly remember porn sites among the first sites that implement secure [sockets] layer because they want to charge you. They want you to pay to get some contents.

In fact, I would say that [was] a driver for a lot of web security technology that we know of today....

...[T]o say going to porn site you get infected is completely opposite to what I know.

EX1046, 182:3-21.

Dr. Lee thus explained the reality of the situation at the time of the invention: Sites offering pornographic material were early adopters of security-related technologies. *Id.* A POSA, aware of what was happening in industry, would certainly understand a system like Duvall’s would not be extended to handle security—security was already being addressed by pornographic sites themselves, and required different context and considerations. Moreover, the pornographic sites detected by Duvall were likely to be secure. Security was part of their

business model. *See* EX2022, 13-20. The undisputed evidence confirms a POSA would not modify Duvall as proposed because the concepts of securing against objectionable material and securing against potentially security-related events are orthogonal.

A POSA would not have thought to look for potentially security-related events when starting with Duvall. A POSA would understand Duvall seeks to restrict access to a type of data that would have been expected to be “safe”—at least from a security perspective. Introducing Chu would not have resulted in a fundamental repurposing of Duvall to look for potentially security-related events. Even the forced and improper combination of these two references would not correspond to the claims.

II. PETITIONER’S LATEST ATTEMPT TO JUSTIFY THE INTRODUCTION OF FEATURES FROM CHU INTO DUVALL ARE UNTIMELY AND INCORRECT.

PO highlighted inconsistencies with Petitioner’s expert asserting that Duvall had a problem with filtering “too much or too little,” while conceding “nothing more [was] needed” beyond what was already disclosed by Duvall to address this supposed issue. *See* POR, 9-12. PO also observed this testimony directly contradicts the alleged rationale for looking to Chu, as there is no motivation “to seek additional techniques for more accurately resolving the status of residue data

transmissions,” because “given the operation of Duvall, a [POSA] would understand that nothing more is needed.” *See id.* (comparing EX1003, 107, with EX2007, 133:17-22). Although Petitioner now disavows it, this rationale appears on page 19 of the Petition, and a portion is even bolded.

Yet now the Reply seeks to rewrite the alleged motivation by stating that the earlier-alleged motivations “are directed to improving the process for determining *when* to edit filters” (emphasis added).

The Board should ignore the Reply’s new alleged motivation as untimely. Petitioner never explains why it is changing theories mid-IPR. Should the Board consider this new motivation, a fulsome analysis reveals even further factual problems with the reliance on Duvall and Chu.

A. Petitioner’s New Motivation Improperly Extracts a Mere Temporal Suggestion.

A prior art reference must be considered in its entirety, *i.e.*, as a whole. *W.L. Gore & Assoc., Inc. v. Garlock, Inc.*, 721 F.2d 1540 (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). Petitioner thus needs to provide a fact-based accounting of not just *when* a change to the filters allegedly is to be made, but also what Chu specifically teaches about *who* is making the change, *where* the change is being made, and *why* the change is being made in the first place. Petitioner cannot just pluck the “when” without resolving these other questions.

The “who” and “where” in Chu are wrong. Chu teaches allowing end-users to make determinations on their own computers about whether to navigate to certain sites even if warnings are presented. Doing so would be catastrophic for Duvall, given Duvall’s desire to restrict access to objectionable material. For example, minors could make decisions about whether to visit pornographic sites—at their own computers. Indeed, Chu effectively teaches how to bypass the very protections Duvall seeks to provide, regardless of whether Duvall were modified to handle computer security or just objectionable material. In fact, the resulting combination would be particularly vulnerable to a host of exploits. *See* EX2022, 21-22. A factual accounting reveals the proposed motivation is unreasonable, and the combination would not have been made. *See also* POR, 10-11.

B. Making an On-the-Fly Trust/Do-Not-Trust Decision Would Hurt Duvall’s System—Not Improve It.

The relied-upon policy from Chu essentially allows a party to make an on-the-fly determination of whether to trust a particular site after it fails to match any filters. But a POSA would understand that empowering any party to make a trust/do-not-trust decision as taught by Chu in Duvall’s context would—at best—be counterproductive.

Allowing end-users to make determinations on their own computers would create the very sorts of problems Duvall seeks to avoid. Even assuming *arguendo*

a remote analyst would determine whether to trust a particular website, that determination would result in objectionable pornographic material being provided to Duvall-Chu's end-user. And in the security context, analysts are simply not capable of making such determinations on-the-fly. *See* EX2022, 23.

A POSA would recognize non-objectionable material is at least equally likely to raise security concerns compared to objectionable material. EX2016, 36-37. Dr. Lee's greeting card and Dr. Jeffay's Melissa Virus examples accord. *See id.*, 36-38; EX1030, 4. As Dr. Lee explained, sites offering pornographic material were early adopters of security-related technologies; they were "a driver for a lot of web security technology that we know of today." EX1046, 9-10-21; *see also* EX2022, 24.

Thus, a POSA would understand that a trained analyst making security-related trust decisions would reasonably permit pornographic material to reach the end-user. Such material would be expected, i.e., trusted, to be reasonably secure given the security implemented by pornographic sites at the time of invention. *See* EX2022, 25. This expected operation would ultimately harm Duvall's system, not improve it. A POSA considering this factual background would not have made the alleged combination.

C. The Newly Proposed Motivation Is Unrealistic.

The Reply on page 3 states “[t]he motivations provided in the Petition do not propose a new filter-editing mechanism in Duvall”—yet on page 4 states “the Duvall-Chu combination provides a ‘suitable’ improvement to Duvall’s default ‘block or allow’ operation.” There is no separate filter editing for “Duvall’s default ‘block or allow’ operation”; thus, the Reply is indeed proposing some “new filter-editing mechanism in Duvall.”

This internal inconsistency notwithstanding, the newly-proposed motivation is unrealistic. The relied-upon policy of Chu does not even contemplate editing filters. Chu’s whitelist and blacklist are not modified after an end-user makes a trust/do-not-trust decision. Thus, there is no teaching or suggestion in Chu to modify filters (much less a default filter applied after all other individual filters are applied), as Petitioner apparently now alleges. *See* EX2022, 26-28.

Moreover, Chu’s policy is about enabling an end-user to make a “one-off” override decision. A POSA would not modify Duvall to have a trained remote analyst make such snap decisions for all navigation attempts reaching uncertain determinations. Not only would this be unrealistic in practice, but a decision to make a one-off call in no way motivates a change to a multi-use, multi-user filter intended for future application. *See id.* The proposed combination is even more farfetched because the alleged “improvement [is] to Duvall’s default ‘block or

allow’ operation.” *See* Reply, 4 (emphasis added). A POSA would not expect to modify a default operation based on a one-off override decision. This is inconsistent with the empirical operation and decision-making appropriate in this art. *See* EX2022, 26-28.

Petitioner’s latest alleged motivation thus is unrealistic in terms of both what is being modified, and when.

A POSA would not have arrived at the claimed subject matter because the alleged combination would require the wrong person (end-user) making the wrong kind of decision (trust/do-not-trust) at the wrong place (end-user computer) at an unrealistic time (with each unresolved trust decision) and with the wrong effect (a one-off allow/block vs. a default filter change)—all in the context of content that would be expected/trusted to be reasonably secure, even though it would be deemed objectionable for Duvall. This untimely, unreasonable motivation does not help establish obviousness.

III. THE ALLEGED COMBINATION WOULD NOT ANALYZE POST-FILTERING *RESIDUE*.

PO provided a detailed technical explanation of how Duvall’s filters operate, and how Duvall fails to disclose post-filtering residue even under Petitioner’s improper reading of Duvall. *See* POR, 12-29. The Board should neither read

“residue” out of the claims, nor read isolated portions of Duvall out of context, as the Reply urges.

A. The Board Should Give Patentable Weight to the Term “Residue.”

The Board should not read “residue” out of the claims, as Reply II.C.1 urges. Petitioner’s Reply asserts “there is no requirement that claim 1’s ‘filtering’ and ‘analysis of post-filtering residue’ must operate on the same ‘data.’” Yet claim 1 as a whole makes clear that simply is not the case—and the specification confirms it.

In claim 1, the filtering subsystem is configured “to analyze status data ... wherein the analysis includes filtering followed by an analysis of post-filtering residue.” The definite article in claim 1 refers back to the infinitive “to analyze”—and claim 1 is clear what is being analyzed in “*the analysis*” is the status data. “[T]he analysis” in claim 1 “includes filtering followed by an analysis of post-filtering residue.” And the following phrase emphasizes “the post-filtering residue is data neither discarded nor selected by filtering.” Again, in claim 1, there is clear antecedent basis for the post-filtering residue “data.” The post-filtering analysis is

not for just any data, as Petitioner alleges.³ The use of the term “residue” means there is some “leftover” status data.

The patent specification at 8:51-62 confirms an embodiment of claim 1 operates in accordance with PO’s construction. The arrows from box 2010 (sensor data collator) to the anomaly engine 2050 via the negative (data rejection) and positive (data selection) filtering subsystems 2020, 2030, pictorially confirm Petitioner’s interpretation is incorrect.

The Board should give full effect to all words, including the term “residue.” Giving all terms from claim 1 (and claim 18, which recites parallel language) their due weight confirms the alleged combinations lack the specifically-claimed analysis of post-filtering residue.

³ Again, the Reply is opposite to Petitioner’s litigation position: “This language requires only that analyzing status data: (1) ‘includes filtering,’ and (2) a further analysis of any status data that was ‘neither discarded nor selected by filtering.’” EX2021, 17. Also, “status data is filtered and any status data that does not match a filter is ‘post-filtering residue.’” *Id.*, 47-48. Petitioner’s briefing agrees with PO: There is a two-part analysis, involving filtering status data, and analysis of status data residue.

B. The Board Should Consider Duvall as a Whole When Determining What It Teaches a POSA.

Reply C.1.b is improper because it fails to consider what Duvall as a whole teaches. The POR in V.B.3-V.B.5 demonstrates in detail that Petitioner's reading is incorrect.

While Petitioner makes much of block 100 in Duvall's Fig. 3, 4:40-43 means the open command is contemplated for execution. Indeed, Duvall at 4:56-58 confirms the open command is not necessarily successful. Yet Petitioner never confronts this teaching contradicting its surface-level reading of Duvall.

Petitioner compounds this error in asserting "both direct- and deferred-action filters are searched for the *same* message transmitted through the data stream." Reply, 7-8. This is wrong. Although the Reply cites to 4:45-55 and 4:65-5:1, these portions of Duvall discuss retrieving filters. Thus, what is the same is the subset of retrieved filters that are applied, NOT the data being filtered. At best, these portions are about applying retrieved filters to the same overall stream. As PO previously explained, the data considered by direct and deferred action filters are ultimately different data within that same stream. *See* EX2022, 29-31. Thus, when Duvall is properly considered as a whole, it is clear that Fig. 3 operates on different data than Fig. 4.

Thus, the Reply does not demonstrate the references, individually or collectively, teach analysis of the post-filtering residue as claimed.

C. Petitioner’s Sleight of Hand in Reply II.C.2 Should Be Rejected.

1. The Claims and Specification Indicate a Two-Part Analysis.

PO previously explained “[a] proper construction of ‘post-filtering residue’ requires the filtering that creates the ‘post-filtering residue’ to be distinct from the ‘analysis of post-filtering residue.’” POR, 25. That language is NOT contradicted by claim 1, as the Reply asserts. In fact, the Reply nonsensically encourages post-filtering analysis of something other than “residue,” which is contrary to the express claim language.⁴

The argument bridging pages 9-10 of the Reply accuses PO of trying to read limitations from the specification into the claims. But Petitioner misreads the claim language itself to require “positive and negative filtering subsystems.” This is presumably to set up an argument that a separate anomaly engine is not claimed—all in an effort to blend together distinctly-claimed operations for (a) filtering that creates post-filtering residue, and (b) analysis of post-filtering residue that follows.

⁴ PAN’s litigation briefing agrees there are two distinct analyses, and residue includes status data. *See* footnote 3.

Claim 1 requires “a filtering subsystem,” not positive and negative filtering subsystems. The “filtering subsystem” of claim 1 could be implemented to include both positive and negative filtering subsystems, as well as an anomaly engine. This much is indicated in at least block 2000 of Fig. 1, and is consistent with the descriptions at 5:25-29 and 8:51-65. At base, claim 1’s filtering subsystem conducts two distinct kinds of analysis, one that involves filtering to create residue “followed by” one that analyzes the thus-created residue.

Petitioner’s novel attempt to read the term “residue” out of the claim is improper. The term cannot be ignored. It is one part of a two-part analysis procedure, which is absent from Petitioner’s combination.

2. Petitioner’s Misread of Duvall Discloses a Single Filter Database with Filters Acting Together in Concert, Not as Separate Analyses.

Petitioner’s Reply at page 10 alleges it is “[c]lear from Figures 3 and 4, Duvall’s deferred-action filters are not a continuation of the direct-action filters but come afterwards as their own discrete set of analyses.” But that is only true if the direct- and deferred-action filters are applied to different data as PO previously explained.

Duvall discloses a single filter database. Each filter entry has a field specifying whether it is a direct or deferred action filter. EX1004, 4:12-15. Therefore, Duvall has a single collection of both direct- and deferred-action filters

that are stored and searched together. *See id.*, 4:17-30. And under PAN's (mis)reading of Duvall, direct- and deferred-action filters are applied to the same piece of data.

Accordingly, Petitioner's expansive view actually contradicts the Reply, because Duvall would teach that deferred-action filters are no different than direct-action filters, other than containing additional fields. They are stored together, searched together, and apply to the same data in the same way. And there is no reason why a direct-action filter could not also include the additional fields of the deferred-action filter.

Based on Petitioner's view, the direct and deferred-action filters merely act depending on whichever match happens to come first and based on whichever order the filters happen to be stored in. *See id.*, 4:27-30. Accordingly, the alleged sequential relationship between boxes 104 and 116 in Duvall's Fig. 3 would merely represent an exemplary situation where direct actions happen to come first—rather than a discrete set of analyses.

Petitioner is not free to artificially divide Duvall's single filtering process. Even under PAN's (mis)reading of Duvall, "filtering followed by an analysis of post-filtering residue, wherein the post-filtering residue is data neither discarded nor selected by filtering" is not performed.

As a result, a POSA would understand the combination according to PAN's (mis)read would involve a single filter system lacking any sort of distinct analysis of post-filter residue that follows positive and negative filtering, even under Petitioner's reading of Duvall. *See* EX2022, 32-36. All claims are patentable for at least this reason.

IV. THE REPLY STILL DOES NOT ESTABLISH THAT AN ANALYST SYSTEM WOULD BE PRESENT IN THE COMBINATION.

Just because something was known does not mean it would have been obvious for a POSA to have done it. The sentence bridging pages 13-14 of the Reply makes this fundamental error, as does the paragraph bridging pages 14-15. Even knowing how to do something would not make it obvious to have done it. Reply II.D should be rejected as legally flawed.

Furthermore, there must be some fact-based explanation of how the combination of the cited references is supposed to work. *Personal Web Tech., LLC v. Apple, Inc.*, 848 F.3d 987, 994 (Fed. Cir. 2017). In complex technology areas such as this, "such a clear, evidence-supported account of the contemplated workings of the combination is a prerequisite to adequately explaining and supporting a conclusion that a relevant skilled artisan would have been motivated to make the combination and reasonably expect success in doing so." *Id.*

Neither the Petition nor the Reply explains how the combination of the cited references is supposed to work. As shown above, Chu essentially leads away from an analyst system—and even an analyst—by putting control in the hands of the end-user on the end-user’s machine for the end-user to make an individualized trust decision. This is contrary to the teachings and purpose of Duvall. No filters are ever updated in Chu based on this end-user behavior. Petitioner fails to meet the prerequisites for obviousness, which is particularly problematic given the conflicting teachings of the relied-upon references.

Contrary to the allegations on page 15 of the Reply, PO is not urging the Board to ignore other references. PO is urging the Board to examine the proposed grounds of patentability set forth in the Petition, and to assess whether Petitioner has shown it *would have been obvious* to have made a particular combination—not whether it would have been *technically possible* to have done so with the benefit of impermissible hindsight.

The Reply thus changes nothing about the POR’s analysis. It only further emphasizes Petitioner’s problematic approach throughout this proceeding.

V. PETITIONER’S NEW “REASONABLE CAPABILITY” ARGUMENTS ARE LEGALLY INCORRECT AND FACTUALLY UNSUPPORTED.

The Board already found that Duvall does not disclose dynamically modifying the probe during operation thereof as set forth in limitation 1(e). The

Board nevertheless instituted this proceeding because system claim 1 uses the phrase “for dynamically modifying” rather than “configured to dynamically modify”—and therefore can allegedly be met by a showing that the art is reasonably capable of performing the function. *See* IPR2023-00888, Paper 9, fn. 7. The Board cited *ParkerVision* in support of its initial determination. The POR at pages 35-38 shows in detail there is no evidence of the art being reasonably capable of performing in the claimed manner, including when the legal concept of “reasonable capability” is properly understood.

Petitioner asserts that PO’s legal citations regarding the meaning of reasonable capability are incorrect. But the Board already rejected Petitioner’s supposed legal distinction. *See* IPR2023-00888, Paper 12, 6-7 (“We find no distinction in the application of *Parkervision* from an infringement context to an obviousness analysis.”).

Further, Petitioner’s Reply on page 16 cites to *KSR* for the proposition that the legal conclusion of obviousness requires articulated reasoning with a rational underpinning. PO agrees this is Petitioner’s evidentiary burden: PO’s point is those showings have not been made. *ParkerVision* does not supplant *KSR*.

In fact, the Board has already highlighted the factual errors in the Reply’s remaining arguments. For example, the Reply at page 16 asserts “[t]he Petition explains, ‘a POSA would have recognized that Duvall’s “analysis capability of

said probe” is “dynamically modified ... during operation thereof” because taking the system offline each time an update [to Duvall’s filters] was required would be disadvantageous.”” But just because one asserts, in hindsight, that there is a suboptimal implementation does not mean it would have been obvious at the time of the invention to have made a change. *See* IPR2023-00888, Paper 9, 34-35; EX2022, 37-38.

The Reply at page 17 asserts “the recited dynamic modification capability requires nothing more than use of ‘known database editing techniques’ that have been known for decades.” Of course, it is unclear whether Petitioner is talking about claim 1, or an alleged teaching from Duvall. Either way, just because a technique (allegedly) was known does not mean it would be obvious to implement—just as the Board held. *See id.*

Moreover, the Reply focuses on showing dynamic modification of the wrong component (i.e., dynamically modifying the database, not the probe). Even if the database could be dynamically modified, that does not mean the probe’s analysis can be *inherently* dynamically modified. *See* EX2022, 39 (explaining how dynamic modification would depend on application implementation details, not just the mere existence of a database). Petitioner provides no evidence the *probe* would be dynamically modified, even if the *database* were dynamically modified.

There must be more than an allegation that some techniques were known from some other documents. There must be credible evidence the alleged combination would be reasonably capable of performing limitation 1(e). Petitioner has not provided that evidence.

VI. PETITIONER’S ATTACK ON CLAIM 15 IS CONTRARY TO LAW.

Even if limitation 1(e) is interpreted so that it could be invalidated by showing reasonable capability, Petitioner’s attack against claim 15 is legally flawed. The Board has already twice found that actual performance of 1(e) has not been established by Petitioner. *See* IPR2023-00888, Paper 9, 33-35 (“Petitioner fails to show sufficiently on this record how Duvall discloses dynamically modifying said probe during operation thereof after receiving feedback....”); Paper 12, 4-8. PO previously explained claim 15 does not recite mere capability; instead, it extends the (alleged) capability language of limitation 1(e) by using more active terminology. *See* POR, 40-41.

The Reply’s new legal argument relies on *IPXL*. But *IPXL* is irrelevant here because its conclusion “was based on the lack of clarity as to when the mixed subject matter claim would be infringed.” *Microprocessor Enhancement Corp. v. Texas Instruments Inc.*, 520 F.3d 1367, 1374 (Fed. Cir. 2008). Section 112 and infringement are not issues in this proceeding. *See Samsung Electronics America,*

Inc. v. Prisua Engineering Corp., 948 F.3d 1342, 1355 (Fed. Cir. 2020) (finding *IPXL*-type challenges inapplicable in IPRs).

Moreover, “[t]he functional language here does not appear in isolation, but rather, is specifically tied to structure” in limitation 1(e), further confirming there is no *IPXL* problem, and claim 15 should get full patentable weight—where reasonable capability is insufficient to show invalidity. *See MasterMine Software, Inc. v. Microsoft Corp.*, 874 F.3d 1307, 1316 (Fed. Cir. 2017). Claim 15 requires more than mere capability.

The Board should reject Petitioner’s incorrect legal argument and remain consistent with the two decisions it has already reached in IPR2023-00888.

VII. PETITIONER FAILS TO MEET ITS BURDEN FOR INDEPENDENT CLAIM 18.

Claim 18 recites “identified potentially security-related event”—and requires two-part analysis involving “filtering followed by an analysis of post-filtering residue.” Petitioner fails to demonstrate how Duvall-Chu includes these features, with or without Cogger, as shown in the POR and above.

The Reply also misapprehends the POR’s arguments regarding the attempted reliance of Cogger. Petitioner still does not explain how the combination of the cited references is supposed to work, which is a prerequisite for a proper obviousness showing.

VIII. PETITIONER PROVIDES NO EVIDENCE REGARDING SECONDARY CONSIDERATIONS.

The Reply does not introduce any evidence contradicting PO's expert testimony that the claims are embodied by the Counterpane commercial product. Instead, Petitioner quotes an objection to a question rather than the answer that follows. *Cf.* EX1046, 36:17-37:3. That should tell the Board everything it needs to know about the merits of Petitioner's position. Nevertheless, PO notes the following.⁵

Because Counterpane's MSM is "essentially the claimed invention," the nexus is presumed.⁶ *Quanergy Sys., Inc. v. Velodyne Lidar USA, Inc.*, 24 F.4th 1406, 1417-18 (Fed. Cir. 2022). *See* POR, 60-62; *see also* EX2016, 213-215.

Contrary to the Reply's contentions, Petitioner's expert mapped the claim limitations to the product (*see* EX2016, 214), identified which claims the product embodies (*see id.*, 215, stating "Counterpane MSM embodies the challenged claims"), and discussed the analysis of post-filtering residue (*see id.*, stating "[t]he

⁵ V.B and V.C are irrelevant because of the legal errors discussed below.

⁶ The CAFC previously criticized the overly-strict reading of *Fox Factory*, upon which Petitioner relies. *See Teva Pharms. Int'l GmbH v. Eli Lilly & Co.*, 8 F.4th 1349, 1361 (Fed. Cir. 2021) ("[W]e explained, the degree of correspondence between a product and a patent claim falls along a spectrum.") (internal quotations omitted).

Sentry also utilizes an analysis engine to further analyze post-filtering residue which is then sent to the SOC and Socrates) and dynamic modifications (*see id.*, 221-222). All of this was confirmed at Dr. Lee's deposition. *See, e.g.*, EX1046 36:17-19 ("I talk about [how] MSM is embodiment [of] the Schenier patent [and] is captured by the claims."); 37:10-13. And although Dr. Lee stated he had not personally reviewed "internal documents" about how exactly certain functions were implemented (*id.*, 45:22-46:2), he reiterated his opinion was formed based on the "cited ... industry report[s] or references," and he "kn[e]w this technology" because "Bruce Schneier was giving a talk at a conference [he] attended" (*id.*, 29-4-21). Dr. Lee specifically relied on Exhibits 2009-2015 and 2017, which match his recollection. *See* EX2016, 213. Nothing else is needed to establish the nexus. *See also* EX2022, 40.

Dr. Lee's evidence is credible, un rebutted, and demonstrates patentability.

IX. PETITIONER CANNOT ELIMINATE THE LIMITATION 1(B)/1(C) TEMPORAL REQUIREMENT FOR CLAIM 6.

Petitioner attempts to rewrite claim 6 by arguing there is no requirement for the "identifying step" (limitation 1(b)) to precede the claimed transmittal to an analyst (limitation 1(c)). Petitioner is wrong. The plain language of claim 1 requires events to be identified by limitation 1(b) before limitation 1(c) can "transmit information about *the identified* events."

X. PETITIONER FAILS TO EXPLAIN HOW TRCKA COULD BE COMBINED WITH DUVALL-CHU.

Petitioner argues PO “fails to address the prior-art combination in the Petition.” But Petitioner never explains what its proposed combination actually is or how Trcka’s techniques could be combined with Duvall-Chu. Rather, Petitioner only points to disparate components and techniques disclosed by the cited art while failing to explain *how* a POSA would have put them together. Petitioner’s Reply does not resolve the problems identified in the POR.

XI. THE LACK OF A PROPER MOTIVATION FOR MODIFYING DUVALL DOOMS DUVALL-CHU-TRCKA-ZIESE.

Petitioner suggests its “proposed combination does not require modifying Duvall to include additional servers,” but modifies Duvall for use in a distributed corporate network requiring multiple servers. Petitioner belatedly recharacterizes this modification as “address[ing] the scenario where Duvall’s architecture is implemented at multiple network sites.” But this recharacterization does not change the fact that Petitioner must modify Duvall for actual implementation at multiple network sites. Petitioner’s “scenario” is neither disclosed nor inherent. Thus, Petitioner’s lack of motivation for this modification is fatal.

XII. CONCLUSION

The Board should find all claims patentable.

Respectfully submitted,

Dated: June 24, 2024

/Nolan M. Goldberg/

Nolan M. Goldberg (Reg. No. 54,126)
PROSKAUER ROSE LLP
Eleven Time Square
New York, NY 10036-8299
Baldassare Vinti (Reg. No. 43,970)

*Counsel for Patent Owner
BT Americas Inc.*

WORD COUNT CERTIFICATION

Under the provisions of 37 C.F.R. § 42.24(d), the undersigned hereby certifies that the word count for the foregoing Patent Owner's Sur-Reply totals 5,583 words, which is less than the 5,600 allowed under 37 C.F.R. § 42.24(c)(4). Counsel has relied upon the word count feature provided by Microsoft Word™.

Dated: 6/24/2024

/Nolan M. Goldberg/

Nolan M. Goldberg (Reg. No. 54,126)
PROSKAUER ROSE LLP
Eleven Time Square
New York, NY 10036-8299

*Counsel for Patent Owner
BT Americas Inc.*

CERTIFICATE OF SERVICE

The undersigned hereby certifies that a true copy of the foregoing Patent Owner's Sur-Reply and all exhibits filed therewith, was served on Petitioner on 6/24/2024, by emailing a copy to counsel at the email addresses listed below:

Jonathan Tuminaro
Daniel S. Block
Michael D. Specht
Steven M. Pappas
STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
1100 New York Avenue, N.W.
Washington, D.C. 20005
Tel. (202) 371-2600
Fax. (202) 371-2540

jtuminar-PTAB@sternekessler.com
mspecht-PTAB@sternekessler.com
dblock-PTAB@sternekessler.com
spappasPTAB@sternekessler.com
PTAB@sternekessler.com.

Dated: 6/24/2024

/Nolan M. Goldberg/

Nolan M. Goldberg
PROSKAUER ROSE LLP
Eleven Time Square
New York, NY 10036-8299
Registration No. 54,126

*Counsel for Patent Owner
BT Americas Inc.*