

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

KEYSIGHT TECHNOLOGIES, INC.,
Petitioner,

v.

CENTRIPETAL NETWORKS, LLC,
f/k/a/ CENTRIPETAL NETWORKS, INC.
Patent Owner.

Case IPR2023-00446
U.S. Patent No. 10,567,343

**PATENT OWNER'S PRELIMINARY RESPONSE
UNDER 37 C.F.R. § 42.107**

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PATENT OWNER'S EXHIBIT LIST

Exhibit	Description
2001	U.S. Pat. App. Pub. No. 2012/0084866 ("Stolfo")
2002	Petition for <i>Inter Partes</i> Review, <i>Palo Alto Networks, Inc.</i> , v. <i>Centripetal Networks, Inc.</i> , No. IPR2021-01155, Paper 2 (P.T.A.B. July 6, 2021)
2003	U.S. Patent No. 9,686,193
2004	Decision Denying Petitioner's Request for Rehearing of Decision on Institution, <i>Cisco Sys., Inc. v. Centripetal Networks, Inc.</i> , No. IPR2018-01559, Paper 9 (P.T.A.B. Sept. 18, 2019)
2005	Complaint for Patent Infringement, <i>Centripetal Networks, Inc. v. Keysight Technologies, Inc.</i> , No. 2:22-cv-00002, Dkt. No. 1 (E.D. Va. Jan. 1, 2022)
2006	Affidavit of Service of Complaint, <i>Centripetal Networks, Inc. v. Keysight Technologies, Inc.</i> , No. 2:22-cv-00002, Dkt. No. 14 (E.D. Va. Jan. 15, 2022)
2007	Opinion and Order, <i>Centripetal Networks, Inc. v. Cisco Systems, Inc.</i> , No. 2:18-cv-00094-HCM-LRL, Dkt. No. 621 (E.D. Va. Oct. 5, 2020)

I. INTRODUCTION

The Board should exercise its discretion to deny institution under 35 U.S.C. § 314(a) because Petitioner¹ admittedly used the Board's decision denying institution in IPR2021-01155 ("the '1155 decision," Ex. 1077) as a roadmap to construct this Petition, which challenges the same claims. Aside from the Emerging Threats reference ("Emerging Threats," Ex. 1020), which Petitioner claims cures the deficiencies of Sourcefire noted in the '1155 decision and numerous decisions upholding the patentability of a related patent,² the Petition is remarkably similar to the '1155 Petition. That Petitioner challenged the same claims that the Board previously confirmed, used the decision denying institution as a roadmap, and delayed filing until the end of the statutory bar period, all while not justifying its delay, which raises the same concerns for abuse outlined in *General Plastic*. See *Gen. Plastic Indus. Co. v. Canon Kabushiki Kaisha*, No. IPR2016-01357, Paper 19 (P.T.A.B. Sept. 6, 2017) (precedential). The Board should deny institution.

¹ Keysight Technologies, Inc., ("Petitioner") petitioned for *inter partes* review (IPR) of U.S. Patent No. 10,567,343 (Ex. 1001, the "'343 Patent"), challenging claims 1-20 ("the Challenged Claims").

² U.S. Patent No. 9,686,193 ("the '193 Patent," Ex. 2003).

The Board should also exercise its discretion to deny the Petition under 35 U.S.C. § 325(d) because the same or substantially the same art and arguments were previously presented to the Office. The Board already denied one petition challenging the '343 Patent under § 325(d) because Sourcefire, the sole reference cited against the claims, was overcome during original prosecution, and the prior petitioner could not identify any material errors in the Examiner's analysis. Ex. 1077 at 19-20. Although Petitioner now contends that the Examiner "erred" by not having considered Emerging Threats, that reference is entirely cumulative to the Stolfo reference considered and overcome during original prosecution, which also discloses Snort rules for identifying certain keywords (*e.g.*, "confidential," "top secret," and "privileged") in network traffic. Petitioner neither acknowledges nor attempts to distinguish Emerging Threats from Stolfo.

The Board should also deny institution because Emerging Threats does not qualify as a printed publication. That reference, a text file of rules from a website called Emerging Threats, was not publicly accessible as of the critical priority date of the '343 Patent. The file was stored many directory levels deep into the Emerging Threats website, and Petitioner provides no evidence that the document was indexed and searchable, that anyone accessed the document, or that anyone ordinarily interested in the art would have known about the document or how to reach it.

Finally, the Board should deny institution because the Petition fails to show a reasonable likelihood that the Emerging Threats reference satisfies the claim limitation that distinguished the Challenged Claims during prosecution and through the prior proceedings. Namely, the Emerging Threats reference does not teach or suggest the claimed packet-filtering rule and “packet transformation function configured to prevent an exfiltration operation.” Ex. 1001 at 11:51-61. The four Snort rules plucked from the ten-thousand rules in Emerging Threats facially do not reach the claims, and Petitioner does not adequately explain what further modifications to these rules would be required to reach the claimed invention or why a POSITA would have made them.

Although there are a variety of reasons why the '343 Patent is valid, this Preliminary Response focuses on only limited reasons why *inter partes* review should not be instituted. See *Travelocity.com L.P. v. Cronos Techs., LLC*, No. CBM2014-00082, Paper 12 at 10 (P.T.A.B. Oct. 16, 2014) (“[N]othing may be gleaned from the Patent Owner’s challenge or failure to challenge the grounds of unpatentability for any particular reason.”). The deficiencies of the Petition noted herein, however, are sufficient for the Board to find that Petitioner has not met its burden to demonstrate a reasonable likelihood that it would prevail in showing unpatentability of any of the Challenged Claims.

II. THE '343 PATENT

A. Overview of the '343 Patent

The '343 Patent discloses techniques for preventing “[a] category of cyber attack known as exfiltrations (e.g., stealing sensitive data or credentials via the Internet)” Ex. 1001 at 1:28-31. Exfiltrations are essentially a data heist, in which malicious actors, for example, transfer files containing sensitive information or post login credentials (e.g., usernames and passwords) to untrusted network sites. *Id.* at 2:54-58.

The inventors of the '343 Patent recognized that exfiltrations had “proven to be especially difficult for conventional cyber defense systems to prevent.” *Id.* at 1:28-31. At the time the invention was made, computer security networks were set up under the mindset that network traffic coming from an “untrusted”—often external—source were potentially suspicious, and internal network traffic was “trusted.” Such mindsets are generally referred to “network trust models”. *See id.* at 1:36-38 (describing a “typical network trust model”). Because exfiltrations are often performed on internal networks, such exfiltrations appear as normal network traffic to observers operating conventional cyber defense systems. *Id.* at 1:31-36. Because users often “engage in network activities that are vulnerable to attack” and “typical network trust models...interpret exfiltrations as trusted operations,” conventional cyber security systems would allow exfiltration traffic to exit the

network without any remedial action being taken. *Id.* at 1:36-40. This problem is akin to the casino vault in the film *Ocean's Eleven*, where countless security features kept thieves from breaking into the vault but let the heist crew dressed as police officers walk out the front door with the bank's money.

The inventors of the '343 Patent understood that prior attempts to thwart exfiltrations by simply blocking all communications was fruitless. *Id.* at 7:29-35. Doing so resulted in all network traffic being blocked, and impeded a user's ability to access the internet and effectively conduct business on behalf of a company. *Id.* The '343 Patent addresses these problems and allows users to surf websites and conduct ordinary company business while preventing exfiltrations, among other cyber attacks. *Id.* at 7:35-40.

B. Prosecution History of the '343 Patent

The '343 Patent issued from U.S. Patent Application No. 15/614,956 ("the '956 Application") filed on June 6, 2017. Ex. 1001, Cover.

The '343 Patent was subject to a comprehensive and substantive examination by the Office. In a September 27, 2018 non-final office action, the Examiner rejected independent claims 1, 8, and 15 as being obvious under 35 U.S.C. § 103 over *Ahn* in view of *Freimuth*. Ex. 1002 at 290-98. Also, dependent claims 7, 14, and 20 were rejected as obvious over *Ahn* in view of *Freimuth* and *Buck*. *Id.* at 304-05. In response to the Office Action, Applicant amended the independent claims to specify

that the “at least one packet transformation function” is “configured to prevent an exfiltration operation.” *Id.* at 271, 273-74, 276. On June 3, 2019, the Examiner issued a final Office Action, again rejecting independent claims 1, 8, and 15, but replacing the secondary reference *Freimuth* with *Stolfo*. *Id.* at 99-106.

On November 4, 2019, Applicant filed a Request for Continued Examination (“RCE”) with an accompanying response. *Id.* at 76-88. The accompanying response amended the independent claims to recite that “the at least one packet transformation function indicates whether each packet in the second portion of packets is allowed to continue toward its destination.” *Id.* at 77, 79-82. Applicant explained how the prior art did not teach “apply[ing], to each packet in the second portion of packets that match the second criterion, at least one packet transformation function configured to prevent an exfiltration operation, wherein the at least one packet transformation function indicates whether each packet in the second portion of packets is allowed to continue toward its destination.” *Id.* at 84-88.

On December 12, 2019, the Examiner issued a Notice of Allowance. *Id.* at 35–40. In the allowance, the Examiner remarked that they “believe[] that the record of the prosecution as a whole does make clear the reasons for allowing claims 1–20” and to “[p]lease refer to record of prosecution.” *Id.* at 40. The ’343 Patent then issued on February 18, 2020. *Id.* at 29; Ex. 1001.

C. Reexamination of the '193 Patent

Relevant to this case are the Office's prior considerations of the '193 Patent, which was deemed patentable in two earlier post-issuance proceedings. Ex. 1070 (denying institution of *inter partes* review); Ex. 2004 at 2–6 (denying request for rehearing of decision denying institution of *inter partes* review); Ex. 1085 at 3-7 (Notice of Intent to Issue Ex Parte Reexamination Certificate); Ex. 2007 at 22–23 (finding the '193 Patent “valid and directly infringed.”). Like the '343 Patent, the '193 Patent is directed to preventing exfiltrations. See Ex. 1085 at 122 (“[T]he '193 Patent's claims recite filtering packets received from one network and destined for two other networks, illustrating that the claims are directed to the exfiltration scenario [described in the specification]”).

The Board denied first IPR of the '193 Patent in IPR2018-01559 (Ex. 1070), finding that the petitioner in that case, Cisco Systems, Inc. (“Cisco”), did not establish that *Sourcefire* teaches the claimed “operator.” See Ex. 1070 at 9–13. Notably, the institution decision in IPR2018-01559 issued *after* the Board instituted trial in IPR2018-01436, demonstrating that the Board found the '193 Patent patentably distinct from the '552 Patent. Following the decision to deny institution, Cisco filed a request for *ex parte* reexamination of claims 18 and 19 of the '193 Patent, once again alleging obviousness over *Sourcefire*. Ex. 1085 at 231-316; see *also id.* at 269-70. Much like Petitioner does in this proceeding, the reexamination

request relied heavily upon the Board's Final Written Decision in IPR2018-01436, involving the '552 Patent. *Compare* Paper 2, Petition, ("Pet.") at 3, 17, 20, 47, 49, 51-52, 54-55, 58 *with* Ex. 1085 at 285-86.

The Office ordered reexamination of the '193 Patent on May 1, 2020, and issued an Office Action on September 23, 2020, rejecting claims 1–20 of the '193 Patent as being obvious over *Sourcefire*. *See* Ex. 1085 at 183-91; *see id.* at 154-82. On January 25, 2021, Patent Owner filed a Response to the Office Action. *Id.* at 116-49. The response argued that *Sourcefire* does not disclose the claimed "operator." *Id.* at 117, 127-30.

Patent Owner also argued that objective indicia of non-obviousness demonstrated that the challenged claims were patentable over *Sourcefire*. *Id.* at 137-45. For one, Patent Owner apprised the Office of the district court's determination that Cisco's copying of the '193 Patent "provides compelling evidence of nonobviousness." *Id.* at 140, 143.

Patent Owner also argued that there was a long-felt but unresolved need that others failed to solve, namely how to prevent exfiltrations. *Id.* at 138-40. Blocking all traffic associated with a compromised computer was simply not feasible. *Id.* The inventor resolved the issue and prevented malicious exfiltrations by applying an operator that would block communications between a first and second network, but allowing traffic to a third network. *Id.* at 139. This solution overcame prior attempts

to solve the exfiltration problem, which were too coarse or overbroad, and “greatly curtailed the risk of data exfiltration by detecting the threat earlier and acting in response while still preserving the flow of normal network traffic without disruption.” *Id.*

On February 24, 2021, Patent Owner conducted an Examiner interview, during which the Examiner and Patent Owner discussed the differences between the claims of the '193 Patent and the '552 Patent in front of the review panel of three examiners. *Id.* at 10-14; Manual of Patent Examining Procedure (“MPEP”) § 2281 (9th ed. Rev. 10, June 2020). Patent Owner distinguished the '193 Patent from the '552 Patent, explaining that “the '193 Patent is directed to preventing data exfiltration, targeting communications leaving a first network and bound for different (second and third) networks.” Ex. 1085 at 11-13.

On April 7, 2021, the Office issued a Notice of Intent to Issue an *Ex Parte* Reexamination Certificate, confirming claims 1–20. *Id.* at 3-7. In the remarks, the Office found that *Sourcefire* “fails to disclose or render obvious a system which include a series of filtering steps recited in the claim.” *Id.* at 6. Moreover, the Examiner agreed to withdraw the obviousness rejection of claims 1–20 over *Sourcefire* “[i]n view of the objective indicia of non-obviousness presented in the record.” *Id.* at 7.

D. Post-Issuance History of the '343 Patent

On March 12, 2021, the '343 Patent was asserted against Palo Alto Networks, Inc. ("PAN"). Ex. 1002 at 9; Ex. 2002 ('1155 Petition) at 3. PAN filed a petition for *inter partes* review of the '343 Patent on July 6, 2021 (IPR2021-01155). Ex. 2002 (Cert. of Service). On January 1, 2022, the '343 Patent was asserted against Petitioner. Pet. at 4. Petitioner was served with a complaint on January 6, 2022. Ex. 2005, Ex. 2006 at 3. On January 20, 2022, the Board exercised its discretion under 35 U.S.C. § 325(d) to not institute *inter partes* review of the '343 Patent because Sourcefire, the same primary reference asserted here, was considered during prosecution of the '343 Patent, and because PAN had not shown that the Examiner erred in considering Sourcefire or the other references relied upon in PAN's petition against the '343 Patent. Ex. 1077 at 16-20. On May 5, 2022, the Board denied PAN's request for rehearing. See Ex. 1086.

E. Claim Construction

Petitioner has indicated that the term "operator" should be discussed based on controversy surrounding the term in prior petitions. Pet. at 20-23; *id.* at 21 ("The use of 'operator' in the '343 patent is consistent with this general use: the operator is a function that may take packets as inputs and ultimately produces a decision as to what to do with the packets."). At this preliminary stage, no express construction of any term is required to resolve any controversy in this proceeding. See *Vivid*

Techs., Inc. v. Am. Sci. & Eng'g, Inc., 200 F.3d 795, 803 (Fed. Cir. 1999) (“[O]nly those terms need be construed that are in controversy, and only to the extent necessary to resolve the controversy.”) (citation omitted). Centripetal does not waive any rights to assert constructions should trial be instituted.

III. THE BOARD SHOULD EXERCISE ITS DISCRETION TO DENY THE PETITION UNDER 35 U.S.C. § 314(a)

The Board should exercise its discretion under 35 U.S.C. § 314(a) to deny institution because the *General Plastic* factors weigh in favor of denying institution of this Petition as a follow-on Petition based on a prior proceeding involving the same patent and same challenged claims (IPR2021-01155, or “the ’1155 IPR”). *Gen. Plastic Indus.*, Paper 19 at 9-10 (enumerating a list of seven factors for considering whether follow-on petitions present inequities to the patent owner or inefficiency of the IPR process).

Despite having the previous challenger’s mistakes spelled out for it in the decision denying institution, Petitioner took more than 11 months to file its serial attack on the ’343 Patent. Petitioner also knew of its new secondary reference, the Emerging Threats reference, at least seven months before it filed this Petition. Ex. 1053 at 1 (Petitioner’s exhibit from the Emerging Threats website with a printed date of June 15, 2022, in the header). On balance, the *General Plastic* factors weigh strongly in favor of discretionary denial.

A. Factor 1: Whether the same petitioner previously filed a petition directed to the same claims of the same patent

Factor 1 weighs in favor of discretionary denial because Petitioner challenges the same claims of the same patent as challenged by the prior petitioner, PAN, and used the decision denying institution in this case as a roadmap to address deficiencies noted in the '1155 decision. *See* Ex. 1077 at 2 (prior petition also challenging claims 1-20 of the '343 Patent).

The Board weighs *General Plastic* factor one in favor of discretionary denial even when a previous petition is filed by a different petitioner against the same claims of the same patent so long as there is a relationship between the petitioners. *Valve Corp. v. Elec. Scripting Prods., Inc.*, No. IPR2019-00062, Paper 11 at 9-10 (P.T.A.B. Apr. 2, 2019) (precedential). Petitioner created an implicit relationship with PAN when it used the prior '1155 decision as a roadmap for its challenge. *See Ericsson Inc. v. Uniloc 2017, LLC ("Ericsson I")*, No. IPR2019-01550, Paper 8 at 12 (P.T.A.B. Mar. 17, 2020) (using a prior petition "as a roadmap for its own petition ties the interest of all of the petitioners together.") (citation omitted). In the '1155 Petition, PAN relied on Sourcefire for allegedly satisfying the exfiltration limitation. Ex. 1077 at 15. The Board denied institution because it found that argument was previously considered. *Id.* at 16, 18-19.

Petitioner used the '1155 decision as a guide for its follow-on petition. Specifically, Petitioner adds an extra reference, Emerging Threats, in an attempt to

find a packet transformation function being configured to prevent an exfiltration operation. Pet. at 2 (citing Ex. 1077 at 9, 11-19); *id.* at 52-58. Like in *Samsung Elecs. Co. v. Elm 3DS Innovations, LLC*, No. IPR2017-01305, Paper 11 at 20 (P.T.A.B. Oct. 17, 2017), Petitioner's citation to a new reference that allegedly cures the deficiencies of another reference, "evinces benefit Petitioner . . . derived from th[e] prior proceeding[]." This commonality between petitions "ties the interest of all of the petitioners together." *Ericsson I*, Paper 8 at 12 (citation omitted).

In another case, the Board weighed Factor 1 in favor of discretionary denial where a different petitioner challenged the same claims of the same patent as an earlier petitioner. *Mitek Sys., Inc. v. United Servs. Auto. Assoc.*, No. IPR2020-01101, Paper 30 at 3 (P.T.A.B. Jan. 26, 2021). There, the Board found the complete overlap in challenged claims, together with evidence that the petitioner "closely monitor[ed]" the district court proceedings of the earlier petitioner, created a significant relationship between petitioners, weighed in favor of discretionary denial. *Id.* at 22-23. The Board also found that because the follow-on petition had used the Board's prior decision denying institution as a roadmap, implicating the fairness concerns discussed in *General Plastic*, and that the petitioner's delay of seven months was "unreasonable," the particular circumstances weighed in favor of discretionary denial. *Id.* at 30, 33-34.

Because there is a complete overlap between the challenged claims, and because Petitioner created an implicit relationship with prior-petitioner PAN, *General Plastic* Factor 1 weighs in favor of denial. See *Valve Corp.*, Paper 11 at 9-10 (finding that “[t]he complete overlap in the challenged claims and the significant relationship between Valve and HTC favors denying institution”); see also *Ericsson I*, Paper 8 at 12 (finding that “[p]etitioner and the prior petitioners in this case are similar to petitioners discussed in *Valve Corp.*” given the implicit relationship).

Even if the Board determines that Petitioner's actions did not create an implicit relationship with PAN, the Board nonetheless exercises its discretion to deny institution when other *General Plastic* factors weigh in favor of denial. See *United Fire Protection Corp. v. Engineered Corrosion Solutions, LLC*, No. IPR2018-00991, Paper 18 at 13 (P.T.A.B. Oct. 10, 2019) (“The potential for abuse of follow-on petitions exists not only with overlapping petitions by the same petitioner, . . . but also with any follow-on petitions.”).

For instance, in *United Fire*, the Board exercised its discretion to deny institution of a follow-on petition despite a lack of relationship between different petitioners, where *General Plastic* factors three and five “weigh[ed] strongly in favor of invoking [its] discretion to deny institution.” *United Fire*, Paper 10 at 15, 17 (P.T.A.B. Nov. 15, 2018); see also *Ericsson Inc. v. Uniloc 2017, LLC* (“*Ericsson II*”), No. IPR2020-00420, Paper 7 at 13 (P.T.A.B. June 18, 2020) (finding “factor

five urges in favor of denying the [p]etition” despite the follow-on petition being filed by a party unrelated to the first petition). The Board considered evidence that the petitioner received “substantial potential benefit . . . to tailor its arguments” using the prior decisions “as a roadmap” and cure the deficiencies that the Board identified in the earlier challenge. *United Fire*, Paper 10 at 13-15. The Board also faulted the petitioner for providing no explanation of a delay of nearly one year long, similar to the instant Petition. *Id.* at 16.

Given the foregoing, Factor 1 is either neutral or weighs in favor of denying institution.

B. Factor 2: Whether, at the time of filing of the first petition, the petitioner knew of the prior art asserted in the second petition or should have known of it

Factor two is neutral because this factor has “little probative value” where the instant petitioner was not the petitioner in the prior proceedings. *See Shanghai Lunion Info. Techs., Ltd. v. Telefonaktiebolaget LM Ericsson*, No. IPR2018-00995, Paper 12 at 17-18 (P.T.A.B. Nov. 13, 2018).

C. Factor 3: Whether at the time of filing of the second petition the petitioner already received the patent owner's preliminary response to the first petition or received the Board's decision on whether to institute review in the first petition

General Plastic Factor 3 weighs strongly in favor of discretionary denial because Petitioner received Centripetal's preliminary response and the Board's

decision to deny trial in the '1155 IPR long before it filed this Petition and tailored its Petition explicitly to address deficiencies noted in both of these earlier challenges.

The Board discourages follow-on petitions in which petitioner delays filing and tailors their arguments to address issues identified in the previous proceeding because “[t]he absence of any restrictions on follow-on petitions would allow petitioners the opportunity to strategically stage their prior art and arguments in multiple petitions, using our decisions as a roadmap.” *Gen. Plastic*, Paper 19 at 17-18; *see also Am. Well Corp. v. Teladoc Health, Inc.*, No. IPR2022-00038, Paper 10 at 21-22 (P.T.A.B. Apr. 19, 2022) (finding that *General Plastic* Factor 3 weighed against institution because petitioner used the prior institution decision as a roadmap to present “updated arguments and evidence” which “raise the fairness and efficiency concerns discussed in *General Plastic*.”). This is the case here.

Using the roadmap provided by the Board's '1155 decision, Petitioner presents updated arguments and art (*i.e.*, the Emerging Threats reference). In *American Well*, the Board determined that these very actions “rais[ed] the fairness and efficiency concerns discussed in *General Plastic*” and thus found that Factor 3 weighed in favor of denial. Paper 10 at 21-22. Petitioner's actions here raise the same fairness concerns, which weigh in favor of the Board exercising its discretion to deny the Petition.

In addition, Petitioner had close to a year to study the deficiencies identified in the Board's '1155 decision and Patent Owner's arguments and update the arguments and evidence before filing the instant Petition. Paper 5 (petition accorded filing date of January 6, 2023); Ex. 1077, Ex. 1002 at 8 ('1155 IPR decision dated January 20, 2022). The Board has found that this type of delayed filing "raises the potential for abuse because [p]etitioner had ample opportunity to study the [previous] arguments . . . and the Board's findings and conclusions of law." *United Fire*, Paper 10 at 13-14 (denying institution in part because Petitioner had roughly two years to study patent owner's arguments and the Board's decision).

In view of the foregoing, *General Plastic* Factor 3 strongly weighs in favor of discretionary denial. See *United Fire*, Paper 10 at 13-15 (finding that factor 3 "weighs strongly in favor of invoking our discretion" because the petitioner used the prior petitions as roadmaps and the delay in filing the petition).

D. Factor 4: The length of time that elapsed between the time the petitioner learned of the prior art asserted in the second petition and the filing of the second petition

Factor 4 weighs in favor of denying institution given that Petitioner knew of Sourcefire and Emerging Threats and their relevance to this case for almost seven months before filing this follow-on Petition on the last possible day. Incredibly, however, Petitioner provides no explanation for the timing of its filing.

The unexplained seven-month stretch of time during which Petitioner was aware of each reference relied on in its Petition falls squarely within the amount of time that the Board has found “weighs strongly against institution.” *Shenzhen Silver Star Intelligent Tech. Co. v. iRobot Corp.*, No. 2018-00361, Paper 15 at 13-15 (P.T.A.B. Sept. 5, 2018) (denying institution where the petitioner was aware of the asserted references **more than five months** before filing its petition); *id.* at 18 n.2 (“the time bar of 35 U.S.C. § 315(b) . . . provide[s] a hard ceiling, which we [the Board] are free to lower as fairness dictates under our general authority not to institute a petition that may otherwise be instituted, under § 314(a)”) (concurring). The manner in which Petitioner uses the Emerging Threats reference in an attempt to address deficiencies in prior petitions exacerbates Petitioner’s unexplained delay in filing its Petition. *See supra* (*General Plastic* Factor 3); *see also infra.* (*General Plastic* Factor 5).

Factor 4, therefore, weighs strongly in favor of denying institution.

E. Factor 5: Whether the petitioner provides adequate explanation for the time elapsed between the filings of multiple petitions directed to the same claims of the same patent

General Plastic Factor 5 weighs strongly for discretionary denial. When the *General Plastic* considerations are applied to petitions filed by different petitioners, factor five is “reasonably read to refer to when Petitioner first had a reason to file a

petition” and “factor five probes why Petitioner took as long as it did to file this Petition.” *Ericsson II*, Paper 7 at 12-13.

Petitioner's substantial delay after learning of the outcome of the prior proceedings weighs strongly in favor of exercising the Board's discretion to deny institution of the present proceeding. *See Valve Corp.*, Paper 11 at 14 (finding the petitioner's filing delay of five months from the prior petitioner's petition weighed in favor of discretionary denial); *Ericsson II*, Paper 7 at 13 (finding that factor five “urges in favor of denying the [p]etition” where the petitioner waited nearly ten months from when it became aware of its infringement accusation); *Mitek Sys.*, Paper 30 at 33-34 (finding petitioner's “unreasonable” delay of at least seven months weighed in favor of discretionary denial).

In this case, the prior petition against the '343 Patent was filed on July 6, 2021, (Ex. 2002), and was denied on January 20, 2022. Ex. 1077, Ex. 1002 at 8. Petitioner was served with a complaint asserting infringement of the '343 Patent on January 6, 2022, and waited an entire year to file this Petition. Ex. 2005, Ex. 2006 at 3. Accordingly, Petitioner had a year to study Patent Owner's arguments raised in the previous IPR challenge and almost a year to study the Board's findings and conclusions in those proceedings. Patent Owner's preliminary response to the prior petition was available as soon as Patent Owner served Petitioner with the complaint in the parallel district court litigation on January 6, 2022. Ex. 1084 (preliminary

response dated October 2021), Ex. 2006. Indeed, Petitioner lists Patent Owner's preliminary response from the prior challenges amongst its exhibits. See Ex. 1084. Petitioner then filed its Petition on January 6, 2023, which is almost a year after the Board issued its decision denying the prior petition on January 20, 2022. Ex. 1077, Ex. 1002 at 8.

The instant Petition does not mention or discuss the *General Plastic* factors at all. See Pet. at 23-27 (discussion limited to *Fintiv* and § 325(d) discretionary denial). Petitioner does not say when it learned of the Sourcefire and Emerging Threats references or attempt to justify the length of time that elapsed between the filing of the Petition and when it first learned of, or reasonably could have learned of, the asserted art. To the extent that any reasonable explanation existed for Petitioner's delay, "it was incumbent upon Petitioner to identify those circumstances to the Board in the Petition itself." *Seki S.P.A. v. CM2W JSC*, No. IPR2020-01636, Paper 9 at 9-10 (P.T.A.B. Jan. 7, 2021) (finding factors four and five in favor of exercising its discretion to deny institution); see also *id.* at Paper 8 (P.T.A.B. Dec. 2, 2020) (denying petitioner's motion for additional briefing and finding it was reasonably foreseeable that patent owner would argue *General Plastic* and that the petitioner should have addressed the factors in the Petition).

Given the objectively long time between the two petitions and Petitioner's wholesale failure to address the delay (or any factors relevant to discretionary denial under *General Plastic*), factor five weighs strongly in favor of discretionary denial.

F. Factors 6 and 7: The finite resources of the Board

General Plastic Factor 6 weighs in favor of discretionary denial. The sixth *General Plastic* factor considers "the finite resources of the Board." *General Plastic*, Paper 19 at 9-10, 16.

The Board's resources would be more fairly expended on initial petitions rather than on follow-on petitions that use earlier cases as a roadmap while ignoring the Board's precedential *General Plastic* opinion. *Id.* at 10. The validity of the '343 Patent and the related '193 Patent have been thoroughly tested during the initial prosecution and the '1155 IPR, with the Board determining that a reconsideration of the patent grant is not warranted. *See* Pet. at 12-14 (Petitioner acknowledging the Office has confirmed the validity of '343 Patent and its parent '193 Patent across multiple IPR challenges and ex parte reexamination). The Board should not entertain another challenge to the '343 Patent's confirmed validity because its resources are better spent reviewing petitions asking for the first time for the Office to reconsider the initial patent grant.

Accordingly, factor 6 weighs in favor of discretionary denial. Factor 7 is neutral because Centripetal has no reason to believe that the Board could not issue a final determination in this case within one year of institution.

* * * * *

On balance, the *General Plastic* factors, which Petitioner does not acknowledge or address, weigh against institution. Denying the Petition would discourage future petitioners from ignoring the issue of improper follow-on petitions and the role of the *General Plastic* and *Valve* analyses in determining whether to deny such petitions. The Board should, therefore, deny institution under § 314(a).

IV. THE BOARD SHOULD EXERCISE ITS DISCRETION TO DENY THE PETITION UNDER § 325(d)

The Board should deny institution under 35 U.S.C. § 325(d) because the Petition re-uses the same, or substantially the same, art and arguments that were previously presented to the Patent Office. 35 U.S.C. § 325(d). There can be no dispute that Sourcefire, and Petitioner's arguments about Sourcefire related to the subject matter of the claimed invention, have been presented to and considered by the Office on numerous occasions. Emerging Threats—the document Petitioner waited at least a year to present to the Office—does not teach or suggest the claimed rules for preventing exfiltration (see Section V.B, *infra*) and is entirely cumulative to other art previously presented to and evaluated by the Office.

The Board applies a two-part framework in evaluating the prior consideration of the same or substantially the same prior art or arguments. *Advanced Bionics, LLC v. Med-El Elektromedizinische Gerate GmbH*, No. IPR2019-01469, Paper 6 at 7-9 (P.T.A.B. Feb. 13, 2020) (describing a two-part framework that demonstrates “a commitment to defer to previous Office evaluations of the evidence of record unless material error is shown”). First, the Board considers whether the same or substantially the same prior art or arguments were previously presented to the Patent Office. *Id.* at 7-8. If this condition is satisfied, the Board then considers whether the petitioner has demonstrated a material error by the Patent Office in the patentability of the Challenged Claims. *Id.* at 8-9.

The first prong of *Advanced Bionics* is satisfied because the Patent Office issued the '343 Patent over Sourcefire, the primary reference asserted in the Petition, and multiple references that show the use of Snort®-based intrusion detection systems to detect exfiltrations, despite Petitioner's assertions to the contrary. Moreover, the Board decided not to institute over a challenge of the '343 Patent based on PAN's use of Sourcefire (IPR2021-01155) and nearly identical arguments to those presented in the '193 Patent's reexamination. *See* Ex. 1002 at 8-27, 39-40; Ex. 1077 at 10, 18-19. Because Petitioner has not demonstrated any material error in the Office's extensive prior considerations of Sourcefire and other references showing the use of Snort®-based intrusion detection systems to detect exfiltrations

in at least as much detail as Emerging Threats, it has not satisfied the second prong of *Advanced Bionics* either. The Board should exercise its discretion under § 325(d) to deny this Petition.

A. The Same or Substantially the Same Art Was Previously Presented to the Office

1. Sourcefire Was Cited in the Prior IPR Against the '343 Patent and Considered During Prosecution

Sourcefire is not a new reference to the Office. Pet. at 14-15; Ex. 1001, code (56) (listing Sourcefire on page 5). As noted above, the IPR petitions, the petitioner's expert declarations in support of those petitions, and key references from prior proceedings (including Sourcefire) as well as the Board's institution decision from IPR2018-01436, were submitted to the Office in an Information Disclosure Statement. Ex. 1002 at 167–169 (IDS filed March 27, 2019), 372-375 (IDS filed August 8, 2018). The Examiner considered the disclosed IPR petitions and documents, including Sourcefire. *Id.* at 127-128, 256-257, 363.

That the Examiner did not apply Sourcefire in a rejection during prosecution is irrelevant to the first prong because “[p]reviously presented art includes art made of record by the Examiner, and art provided to the Office by an applicant, such as on an Information Disclosure Statement (IDS), in the prosecution history of the challenged patent.” *Advanced Bionics*, Paper 6 at 7-8; *see also Telebrands Corp. v. Tinnus Enters., LLC*, No. PGR2017-00040, Paper 10 at 13-14 (P.T.A.B. Feb. 7,

2018); *Unified Patents, Inc. v. Velocity Patent LLC*, No. IPR2017-01723, Paper 10 at 21-22, 24 (P.T.A.B. Jan. 19, 2018) (denying institution under § 325(d) where one of the references was cited in a reexamination IDS, notwithstanding Examiner's caveat that only a "cursory" evaluation of disclosed references had been performed).

2. The Patent Office Previously Considered Substantially the Same Art as Emerging Threats

Petitioner alleges that Emerging Threats is a new reference that the Patent Office did not consider alone or in combination with Sourcefire. Pet. at 2, 12, 26 ("[T]he Examiner erred by not considering . . . Emerging Threats or other publications showing rules for detecting or preventing exfiltration operations designed for use with Sourcefire."). However, as demonstrated below, the relied-on aspects of Emerging Threats (*i.e.* four Snort rules out of a list of ten-thousand unexplained rules) are substantially the same as teachings in multiple references of record during prosecution. Those references include Sourcefire and Stolfo (Ex. 2001), which was applied in a rejection during examination of the '343 Patent. Ex. 1002 at 99-101. Discretionary denial is warranted.

Advanced Bionics established that references in a Petition that "disclos[e] substantially the same information already considered by the Office," represent "substantially the same art" as that already considered, thus making discretionary denial under § 325(d) appropriate. *Advanced Bionics*, Paper 6 at 15, 17-18. Thus, as is the case here, where Petitioner "relies on [a reference] in the same manner" as

the reference previously presented to the Office during prosecution, the petition should be discretionarily denied. *Id.* at 19.

Petitioner relies on Emerging Threats for its alleged disclosure of Snort®-based rules “for detecting and preventing exfiltration operations.” Pet. at 34-43. Petitioner incorrectly argues, however, that “the prosecution record shows no evaluation of Sourcefire in view of Emerging Threats or other publications showing exfiltration prevention Snort rules designed to be used with systems like Sourcefire.” *Id.* at 26. Specifically, Petitioner argues that Emerging Threats includes a variety of rules that detect and prevent exfiltration, for example, by detecting specific text strings, such as “Top Secret,” “TS,” or “NOFORN”; by detecting authorized transmission of a password file; by detecting application information layer information, such as social security numbers; and by detecting specific version numbers of security protocols. Pet. at 37-43. But those Emerging Threats rules on which Petitioner relies are identical to the teachings of Stolfo and Sourcefire, which the Examiner already considered.

Stolfo was introduced in the Final Office Action mailed on June 3, 2019, because of its alleged disclosure of “applying, . . . to each packet in the second portion of packets that match the second criterion, at least one packet transformation function configured to prevent an exfiltration operation, wherein the at least one packet transformation function indicates whether each packet in the second portion

of packets is allowed to continue toward its destination.” Ex. 1002 at 99-101. Petitioner cites Emerging Threats for the same limitation. Pet. 56-58 (“Emerging Threat rules are configured to detect or prevent exfiltration operations, and [a PHOSITA] would have found it obvious to configure Sourcefire using such rules to prevent an exfiltration operation.”).

Stolfo discloses a Snort®-based network intrusion detection system that detects “a beacon can be embedded in a document.” Ex. 2001 at ¶ [0040]. Those embedded beacons or tokens may include keywords (*e.g.* “confidential,” “top secret,” and “privileged”), password information, and social security information. *Id.* at ¶¶ [0047], [0051], [0058], [0075], [0081], [0096], [0140], FIG. 17, and FIG. 18. The information contained in Stolfo’s beacons and tokens is precisely what is detected by Emerging Threats’ rules, according to the Petition. *Compare id. with* Pet. at 37-43. Finally, Stolfo discloses that “[a] network intrusion detection system, such as Snort, can be used to detect these embedded beacons or tokens during the egress or exfiltration of the decoy document in network traffic.” Ex. 2001 at ¶¶ [0097], [0155].

Each of the beacon/decoy information techniques disclosed in Stolfo is identical, or at least substantially similar, to an Emerging Threats rule cited in the Petition. For example, Stolfo’s disclosure of detecting keywords—such as “confidential,” “top secret,” and “privileged”—is substantially similar to Emerging

Threat's rule identified by Snort ID 2002526. Pet. at 37-40 ("The rule then uses Snort's pcre keyword to specify a regular expression to search the HTTP request packets to search for the strings 'TOP SECRET' or 'TS' along with 'NOFORN' separated by appropriate spaces and punctuation."). Similarly, Stolfo's detection of password information and social security information is similar to Emerging Threat's rules 2002034 and 2001328, respectively. Pet. at 40.

Stolfo was overcome, in part, by amending the claims to clarify that the at least one packet transformation function is configured to prevent an exfiltration operation, while allowing other outbound traffic to continue towards its destination. Ex. 1001 at 7:4-40; Ex. 1002 at 86-88, 77, 79-82. The Office was persuaded by Patent Owner's amendments and arguments that the nuanced approach of preventing exfiltration operations while allowing other outbound traffic to pass distinguished the claimed invention over Stolfo. Ex. 1002 at 35-40. Emerging Threats similarly does nothing to prevent exfiltration operations, let alone preventing such operations using the nuanced approach of the Challenged Claims.

Emerging Threats rule 2003021, which alerts a user when encrypted traffic is sent over certain types of ports, is cumulative to Sourcefire. Pet. at 41-43. The Office had access to detailed treatments of Sourcefire from at least the petitions and expert declarations from IPR2018-01436, -01437, and -01559, which argued that Sourcefire disclosed blocking packets based on the SSL/TLS version in combination

with network-layer header information, like a port number. Ex. 1002 at 127 (Examiner indicating the IPR2018-01559 petition and expert declaration were considered); *id.* at 167-69 (IDS filed March 27, 2019 disclosing the IPR2018-01559 petition and expert declaration), 256-57, 363 (Examiner indicating the IPR2018-01436 and -01437 petitions and expert declarations were considered), 373-75 (IDS filed August 8, 2018 disclosing both IPR2018-01436 and -01437 petitions and expert declarations). In fact, Petitioner acknowledges the Board's findings in the '552 Patent's Final Written Decision. Pet. at 51-55, 58. Emerging Threats rule 2003021 is cumulative of Sourcefire.

Because the Office was in possession of Sourcefire (Ex. 1002 at 372 (IDS citing Sourcefire on August 8, 2018), 362-64 (examiner signature indicating Sourcefire was considered on September 4, 2018)) when Stolfo was introduced in the June 3, 2019, Final Office Action, the Office evaluated Sourcefire in view of another publication (e.g., Stolfo) that describes a Snort®-based intrusion detection system that detects exfiltrations. *Id.* at 99–106.

Even if Emerging Threats was a printed publication that the Examiner could have applied in a rejection (*see* Section V.A, *infra*), the handful of rules Petitioner cites to out of the 11,000+ rules in Emerging Threats, is substantially similar to disclosures in Sourcefire and Stolfo that were in front of the Examiner during prosecution. When a petition asserts new references where “there are some

differences in the teachings [] and in the type of [] arguments,” discretionary denial under § 325(d) still is appropriate where “the similarities outweigh the differences such that the arguments may be considered substantially the same.” *Husky Injection Molding Sys., Ltd. v. Plastipak Packaging, Inc.*, No. IPR2020-00437, Paper 23 at 13-18, 22 (P.T.A.B. July 29, 2020). Here, Petitioner rests its § 325(d) analysis on art that is different only in name, but is substantively the same.

Therefore, Emerging Threats is substantially similar art to at least Stolfo, which was cited by the Patent Office and used to reject the claims that eventually issued as the '343 Patent, as well as Kapoor, Korsunsky, Mondaevev, and Sourcefire.

3. The Patent Office and the Board Considered Substantially the Same Arguments as Presented in the Petition

Both the Board and the Patent Office have considered substantially the same arguments as those raised in the present Petition.

Like prior petitions, Petitioner alleges that it would have been obvious to modify Sourcefire to include rules that detect or prevent exfiltrations. Pet. at 14, 26, 37. PAN previously asserted that “a POSITA would have found obvious a rule using the HTTP Method as part of the criteria to invoke the HTTP inspect preprocessor to identify traffic using that HTTP method (*e.g.*, PUT), and either pass or drop those packets based on the inspection.” Ex. 2002 at 49. Similarly, PAN asserted that “a POSITA would have found obvious a rule using the ssl_version keyword to identify traffic using particular versions of SSL or TLS, and either pass or drop those

packets.” *Id.* at 53. The Board correctly rejected these arguments as being substantially similar to the arguments that Cisco made in the Reexamination Request of the ’193 Patent. Petitioner now rehashes arguments both Cisco and PAN already covered. Ex. 1077 at 10, 18-19; *id.* at 16-17.

During prosecution, the Examiner had access to detailed treatments of Sourcefire from at least the petitions and expert declarations from IPR2018-01436, -01437, and -01559, which mapped Sourcefire to the various claim elements of the parent (U.S. 9,160,713), grandparent (U.S. 9,686,193), and great-grandparent patents (U.S. 9,124,552). Ex. 1002 at 127 (Examiner indicating the IPR2018-01559 petition and expert declaration were considered); *id.* at 167 (IDS filed March 27, 2019 disclosing the IPR2018-01559 petition and expert declaration), 256-57, 363 (Examiner indicating the IPR2018-01436 and -01437 petitions and expert declarations were considered), 373 (IDS filed August 8, 2018 disclosing both IPR2018-01436 and -01437 petitions and expert declarations).

The Examiner was also well aware of multiple prior art references that taught SNORT rules that were the same type of rules that Petitioner points to in Emerging Threats. Thus, the Examiner reviewed the relevant art and arguments made in IPR2018-01436, -01437, and -01559, and acknowledged the differences between the ’552 Patent and the ’343 Patent’s claims when concluding that the ’343 Patent’s claims were patentable over Sourcefire and multiple other references that taught the

same type of SNORT rules as Emerging Threats. *Id.*; see also *Telebrands*, Paper 10 at 13-14.

B. Petitioner Has Not Shown Material Error by the Patent Office

“If a condition in the first part of the framework is satisfied and the petitioner fails to make a showing of material error, the Director generally will exercise discretion not to institute” *Advanced Bionics*, Paper 6 at 8-9. The Board should decline to institute IPR in this case because the three, non-exclusive *Becton, Dickinson* factors that the Board considers when determining whether a Petitioner has sufficiently alleged material error (see *id.* at 10-11) all point to the same conclusion: The Board must deny institution under § 325(d).

1. Factor 1: Sourcefire was Evaluated Extensively in Prior Proceedings and Emerging Threats is Substantially Similar to, and Would Have Been Cumulative of, Multiple References Considered by the Examiner

The first factor, *i.e.* “the extent to which the asserted art was evaluated during examination, including whether the prior art was the basis for rejection,” weighs heavily in favor of denying institution under 35 U.S.C. § 325(d).

In denying institution of *inter partes* review of the '343 Patent in IPR2021-01155, the Board found that “there was an extensive history before the Examiner, the Board, and the Federal Circuit concerning Sourcefire and its application to the '552 Patent.” Ex. 1077 at 17-18. The Board also found that “Sourcefire was considered extensively in the reexamination of the '193 Patent.” *Id.* at 18. Based

on the extensive consideration of Sourcefire in the related prosecutions, the Board exercised its discretion under 35 U.S.C. § 325(d) and denied institution of IPR2021-01155. *Id.* at 2, 19-20.

As noted above in Section IV.A.2, Stolfo represents substantially the same art as Emerging Threats, at least as characterized by Petitioner. That is, Stolfo describes a Snort®-based intrusion detection system that detects exfiltrations. Ex. 2001 at ¶¶ [0097], [0155]. Because Stolfo describes using Snort®-based rules that are functionally the same as the rules that Petitioner points to in Emerging Threats, the Patent Office extensively Sourcefire and the types of rules which, by Petitioner's own admission, are the *only* difference between this Petition than PAN's earlier unsuccessful petition. Pet. at 2 ("This petition presents new prior art that discloses using Sourcefire to detect and prevent exfiltrations."); *id.* at 3 ("Emerging Threats, which was not considered by the Examiner or in the prior '343 IPR, discloses the additional limitations in the '343 claims."). But as explained above, nothing in Emerging Threats would have been new to the Examiner, who considered multiple other references that taught the same type of SNORT rules now argued by Petitioner.

Therefore, Factor 1 strongly weighs in favor of discretionary denial under § 325(d).

2. Factor 2: Petitioner Has Not Shown that the Office Committed an Error

Factor 2 inquires “whether petitioner has pointed out sufficiently how the examiner erred in its evaluation of the asserted prior art.” *Advanced Bionics*, Paper 6 at 9 n.10. Petitioner responds by arguing that “the Examiner erred by not considering . . . Emerging Threats or other publications showing rules for detecting or preventing exfiltration operations designed for use with Sourcefire.” Pet. at 26. Petitioner’s allegation is as conclusory as it is wrong.

As discussed above in Section IV.A.2, Stolfo discloses a Snort®-based network intrusion detection system that detects exfiltration operations. Stolfo discloses that “a beacon can be embedded in a document or any other suitable decoy information.” Ex. 2001 at ¶ [0040]. “A network intrusion detection system, such as Snort, can be used to detect these embedded beacons or tokens during the egress or exfiltration of the decoy document in network traffic.” *Id.* at ¶¶ [0097], [0155]. Specifically, Stolfo discloses that those embedded beacons or tokens may include keywords, such as “confidential,” “top secret,” and “privileged.” *Id.* at ¶ [0081]. Moreover, Stolfo discloses that the embedded beacons or tokens may include password information and social security information. *Id.* at FIG. 17, 18, ¶¶ [0047], [0051], [0058], [0075], [0096], [0140]. The information contained in Stolfo’s beacons and tokens is also what is detected by Emerging Threats’ rules, according

to the Petition. *Compare id.* at FIG. 17, 18, ¶¶ [0047], [0051], [0058], [0075], [0081], [0096], [0140] *with* Pet. at 37-43.

The Examiner used Stolfo to reject the claims after having already reviewed Sourcefire and the prior petitions and expert declarations that exhaustively discuss Sourcefire. Ex. 1002 at 99-101, 127 (Examiner indicating the IPR2018-01559 petition and expert declaration were considered), 167 (IDS filed March 27, 2019 disclosing the IPR2018-01559 petition and expert declaration), 362-64 (examiner signature indicating Sourcefire was considered on September 24, 2018), 363 (Examiner indicating the IPR2018-01436 and -01437 petitions and expert declarations were considered), 373 (IDS filed August 8, 2018 disclosing both IPR2018-01436 and -01437 petitions and expert declarations), 372 (IDS citing Sourcefire on August 8, 2018); *see also Telebrands*, Paper 10 at 13-14; *Hengdian Grp. DMEGC Magnetics Co. v. Hitachi Metals, Ltd.*, No. IPR2017-01313, Paper 7 at 15-16 (P.T.A.B. Nov. 6, 2017) (discretionarily denying institution because petitioner failed to provide “any arguments distinguishing the Examiner’s prior consideration of [the prior art], or any compelling reason why [the Board] should re-evaluate substantially the same prior art as that presented during prosecution and considered by the Examiner.”).

Thus, because the Examiner considered Sourcefire alongside Stolfo, and Petitioner has not attempted to show any error in the Examiner’s consideration of

these references, this factor weighs strongly in favor of discretionary denial under § 325(d).

3. Factor 3: There are no Additional Facts That Warrant Reconsideration

Factor 3 concerns “the extent to which additional evidence and facts presented in the petition warrant reconsideration of the prior art or arguments.”

Petitioner argues that the Board should grant the Petition because it cures the deficiencies with PAN's earlier petition of the '343 Patent and Cisco's earlier petition and reexamination of the '193 Patent. *See* Pet. at 13-16. However, this turns the Board's precedent on its head: it is proper for the Board to *deny* a petition under § 325(d) “when petitioners ‘have used prior Board decisions as a roadmap to correct past deficiencies.’” *In re Vivint, Inc.*, 14 F.4th 1342, 1353 (Fed. Cir. 2021) (citation omitted). Accordingly, combined with the *General Plastic* factors and the non-printed publication status of Emerging Threats, copious additional factors weigh in favor of the Board denying institution in this case. This factor weighs strongly in favor of discretionary denial under § 325(d).

V. THE CHALLENGED CLAIMS ARE NOT OBVIOUS OVER SOURCEFIRE AND EMERGING THREATS

“[A] petitioner in an *inter partes* review has the burden of demonstrating unpatentability by a preponderance of the evidence; bare assertion through implication that a reference discloses a claim limitation, without more, is not

enough to meet this burden.” *Garmin Int’l, Inc. v. Logantree, LP*, 825 F. App’x 894, 898–99 (Fed. Cir. 2020) (non-precedential). Petitioner has not met its burden to show that Sourcefire in view of Emerging Threats discloses “applying... at least one packet transformation function configured to prevent an exfiltration operation” or that it would have been obvious to modify Sourcefire with Emerging Threats.

A. Emerging Threats is Not a Printed Publication

The Board should deny institution because Petitioner has not met its burden to prove that the Emerging Threats reference (Ex. 1020) is a prior art printed publication. The document was not publicly accessible to a person of ordinary skill in the art on the alleged date of December 2, 2010 (Pet. at 18) or before the March 12, 2013, effective filing date of the ’343 Patent.³

In determining whether a reference qualifies as a printed publication, “[t]he key inquiry is whether or not a reference has been made ‘publicly accessible.’” *M & K Holdings, Inc. v. Samsung Elecs. Co.*, 985 F.3d 1376, 1379 (Fed. Cir. 2021) (citations omitted). “A reference is considered publicly accessible if it was ‘disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art exercising reasonable diligence, can

³ Petitioner does not dispute that the effective filing date of the ’343 Patent is March 12, 2013. Pet. at 12; Ex. 1001, code (63).

locate it.”” *Acceleration Bay, LLC v. Activision Blizzard Inc.*, 908 F.3d 765, 772 (Fed. Cir. 2018) (citing *Jazz Pharm., Inc. v. Amneal Pharm., LLC*, 895 F.3d 1347, 1355-56 (Fed. Cir. 2018)).

The burden to prove that a reference is a printed publication is on Petitioner. See *Acceleration Bay.*, 908 F.3d at 772; see also *Hulu, LLC v. Sound View Innovations, LLC*, No. IPR2018-01039, Paper 29 at 13 (P.T.A.B. Dec. 20, 2019) (precedential) (“[A]t the institution stage, the petition must identify, with particularity, evidence sufficient to establish a reasonable likelihood that the reference was publicly accessible before the critical date of the challenged patent and therefore that there is a reasonable likelihood that it qualifies as a printed publication.”); 35 U.S.C § 311(b).

The reference in question here is a text file that was stored on a website. Ex. 1020; Pet. at 18-19. So, this issue falls within a “line of cases [that] relates to documents that are available in a repository, whether on the Internet or at a brick-and-mortar location such as a library.” *M & K Holdings*, 985 F.3d at 1380 (collecting cases). In the past, factors that have been relevant to the public accessibility inquiry include: (1) whether the channel through which the references were publicized is “prominent” or well-known among persons of ordinary skill in

the art;⁴ (2) whether a repository indexes its documents or otherwise categorizes them by subject matter;⁵ and (3) whether a repository had search functionality enabling a reasonably diligent researcher to locate the reference.⁶

For the reasons discussed below, the Petitioner failed to establish a reasonable likelihood that the Emerging Threats reference was publicly accessible before the critical date because (1) the Emerging Threats website is not “prominent” or well-known (2) the Emerging Threats reference was not meaningfully indexed and located on the Emerging Threats website, and (3) the Emerging Threats website lacked any search functionality.

1. The Emerging Threats Website was Not Searchable or Meaningfully Indexed

Petitioner fails to raise any argument and present evidence demonstrating that a POSITA or interested member of the public exercising reasonable diligence would

⁴ *Samsung Elecs. Co. v. Infobridge Pte. Ltd.*, 929 F.3d 1363, 1370-73 (Fed. Cir. 2019); *see also Voter Verified, Inc. v. Premier Election Sols., Inc.*, 698 F.3d 1374, 1380-81 (Fed. Cir. 2012).

⁵ *Blue Calypso, LLC v. Groupon, Inc.*, 815 F.3d 1331, 1348-49 (Fed. Cir. 2016).

⁶ *Acceleration Bay.*, 908 F.3d at 772-73; *In re Lister*, 583 F.3d 1307, 1311-12 (Fed. Cir. 2009).

have located it. Nor could they. Petitioner's own evidence indicates that the Emerging Threats rules website lacked a search functionality. Petitioner's evidence appears to show how the Emerging Threats rules website (*i.e.*, "http://rules.emergingthreats.net") currently appears (Ex. 1054) and how it might have appeared in January 12, 2013. Ex. 1030 at 10-11. Both examples demonstrate that the rules website had a boilerplate homepage, shown below, that contain a filesystem-like directory listing of the website's contents, with columns for "Name," "Last Modified," "Size," and "Description":

There are the Emerging Threats.net Open rulesets.

More information available at <http://www.emergingthreatspro.com> and <http://www.emergingthreats.net>

<u>Name</u>	<u>Last modified</u>	<u>Size</u>	<u>Description</u>
blockrules/	10-Jan-2013 23:30	-	
changelogs/	11-Jan-2013 19:59	-	
fwrules/	11-Nov-2010 10:40	-	
open-nogpl/	25-Sep-2012 20:54	-	
open/	25-Sep-2012 20:54	-	
projects/	17-Jan-2011 12:34	-	
research/	05-Oct-2012 21:48	-	
version.txt	11-Jan-2013 19:59	5	

Ex. 1030 at 11; Ex. 1054 (similar). There is no evidence of a search functionality, such as a search field or button, that a POSITA might have used to locate the Emerging Threats reference.

The Emerging Threats rules website's plain homepage also indicates that the rules website was not meaningfully indexed such that a POSITA might have located the reference even when exercising reasonable diligence. See Ex. 1030 at 11; Ex. 1054. When visiting the Emerging Threats website, a POSITA is forced to trawl

through multiple directories and subdirectories, without any useful scheme such as indexing according to rule identifiers (SIDs), date, author. It is unclear how a POSITA seeking the Emerging Threats reference containing Snort rules would have found the reference—not in the “fwrules/” directory, or the “blockrules/” directory, but by clicking on the specific subdirectories “open/,” and then “snort-2.8.4/,” to arrive at the URL “http://rules.emergingthreats.net/open/snort-2.8.4/emerging-all.rules.” Ex. 1030 at 11; Ex. 1054.

Accordingly, the Emerging Threats reference does not qualify as a printed publication because, even according to Petitioner's own evidence, the reference was not meaningfully indexed or available via any search function, such that an interested artisan exercising reasonable diligence would have found it. See *Acceleration Bay*, 908 F.3d at 774 (affirming Board's determination that a reference uploaded to a university website in the prior art period was not a printed publication when it was not meaningfully indexed to allow an ordinarily skilled person to locate the reference using the website's search function).

2. The WayBack Machine Establishes Technical Accessibility, not Public Accessibility

Petitioner appears to assume that any document archived by the Internet Archive's WayBack Machine is *per se* publicly accessible. Ex. 1020; Pet. at 18-19 (arguing the “WayBack Machine shows the public accessibility of [the] Emerging

Threats [reference] . . . by preserving [the reference] as it was ‘made available to the public’ at that date”) (quoting *Valve Corp. v. Ironburg Inventions Ltd.*, 8 F.4th 1364, 1374 (Fed. Cir. 2021)). Petitioner mistakes technical accessibility for public accessibility.

While the existence of a WayBack Machine archive might mean the Emerging Threats reference was technically accessible (*i.e.*, someone could “theoretically find it on the Internet”), “[p]ublic accessibility requires more than technical accessibility.” *Samsung Elecs.*, 929 F.3d at 1369 (citation omitted); *Hulu*, Paper 29 at 10 (citing *Samsung Elecs.*, 929 F.3d at 1369). A reference is publicly accessible only if it was “disseminated or otherwise made available to the extent that persons interested and ordinarily skilled in the subject matter or art, exercising reasonable diligence, can locate it.” *Acceleration Bay*, 908 F.3d at 772 (citations omitted).

The *Valve Corp.* decision cited in the Petition is instructive. In *Valve Corp.*, concluded that there was “overwhelming evidence” of public accessibility of a prior art article in the form of (1) testimony from the inventor and (2) evidence that the patent examiners, who are “trained and required to determine publication dates,” concluded that the article was “published” two years before the priority date. 8 F.4th at 1373-74 (citation omitted). The Court then used the Wayback Machine evidence to corroborate the publication date, not to suggest that the mere existence of a document on the Internet as of a certain date was evidence of public accessibility.

Id. at 1374-75. In the present case, there is no such testimony or determination by an examiner in the record.

Petitioner also cites two cases in support of its mistaken contention that “[t]he Internet Archive’s Wayback Machine shows the public accessibility of Emerging Threats.” Pet. at 18 (citing *Veeam Software Corp. v. Symantec Corp.*, No. IPR2013-00142, Paper 11 at 9-10 (P.T.A.B. Aug. 7, 2013) and *Pohl v. Mh Sub I, LLC*, 332 F.R.D. 713, 717-18 (N.D. Fla. 2019)). But like *Valve Corp.*, these cases do not stand for Petitioner’s proposition. Instead, they further support the conclusion that the Wayback Machine can provide evidence relevant to authenticity of exhibits and technical accessibility, not public accessibility.

3. Petitioner’s Expert’s Testimony is Conclusory and Omits Key Dates and Details

Conclusory testimony by Petitioner’s Expert, Dr. Staniford, fails to demonstrate that the Emerging Threats reference was publicly accessible because the testimony is unsupported and omits key dates and details. Pet. at 19; Ex. 1003 at ¶¶ 202-206. Dr. Staniford’s conclusory statements about the public accessibility of the Emerging Threats reference should be afforded little weight. *See Xerox Corp., v. Bytemark, Inc.*, No. IPR2022-00624, Paper 9 at 15-16 (P.T.A.B. Aug. 24, 2022) (denying institution because the petitioner’s expert merely repeated *verbatim* “the conclusory assertion[s] for which it [was] offered to support . . . without any supporting evidence or technical reasoning”).

Dr. Staniford alleges that “based on my experience the Emerging Threats rules appear to be true copies of the rules that existed in 2010.” Ex. 1003 at ¶ 204. This statement is relevant to the Emerging Threats reference’s authenticity (*i.e.* whether the content of the reference is a “true cop[y]”), not its public accessibility. *Id.* This testimony is silent as to any actual dissemination of the Emerging Threats reference, and is silent as to how and whether a skilled artisan could have located the Emerging Threats reference using reasonable diligence.

Dr. Staniford also claims that he “was made aware of the existence of the Bleeding Snort project on multiple occasions, which later became Emerging Threats.” Ex. 1003 at ¶ 206. Testimony that the Bleeding Snort project existed does not establish facts relevant to the public accessibility inquiry because it does not establish that a person ordinarily interested in the art would have been aware of the Emerging Threats website generally or the Emerging Threats document specifically. For example, testimony does not establish, that the Emerging Threats document was (1) “viewed or downloaded,” (2) an “on-line publication was well known to the community interested in the subject matter of the reference,” or (3) that a person interested in the art “would be independently aware of the web address for” the Emerging threats document. *Blue Calypso*, 815 F.3d at 1349-50 (citation omitted).

Dr. Staniford's testimony regarding his knowledge of Bleeding Snort also omits key dates necessary to determine whether he was aware of Bleeding Snort and/or Emerging Threats prior to the '343 Patent's priority date. Dr. Staniford vaguely says that he was made aware of the project on "multiple occasions" but does not testify as to when these occasions occurred. Ex. 1003 at ¶¶ 203-206. Accordingly, aside from not establishing public accessibility of the Emerging Threats document, Dr. Staniford's testimony about Bleeding Snort does not establish that the Emerging Threats was known to a POSITA prior to the effective filing date of the '343 Patent.

Without these key dates or details, Dr. Staniford's conclusory testimony fails to establish public accessibility of the Emerging Threats reference before the critical date.

4. Petitioner Relies on an Unsupported Link between Bleeding Snort and Emerging Threats to Allege the Emerging Threats Project Was Known to an Interested Skilled Artisan at the Time of the Invention

Petitioner alleges that "Emerging Threats was a well-known independent clearinghouse of Snort rules that were available to a POSA," but Petitioner's supporting documentation either fails to mention "Emerging Threats" or points to a different project named "Bleeding Edge of Snort" or "Bleeding Snort." Pet. at 19 (citing Ex. 1018, Ex. 1050, Ex. 1051).

For example, Petitioner cites to a paper (Ex. 1018) by Martin Roesch that describes the Snort network intrusion detection system, but it makes no mention of Emerging Threats. Pet. at 19 (citing the entirety of Ex. 1018). Petitioner cites to an ITPro Today article describing “a new Web site” named “Bleeding Edge of Snort” but contains no mention or connection to Emerging Threats. Pet. at 19; *see* Ex. 1050 at 2. Petitioner cites to what appears to be a WayBack machine archive of the Bleeding Snort website but it also fails to show any connection to Emerging Threats. Pet. at 19 (citing Ex. 1051). Petitioner's expert testifies that the “[Bleeding Snort] project continues today, renamed to Emerging Threats,” but the exhibits cited in support (Ex. 1053, 1054) do not link the Emerging Threats project with the Bleeding Snort project. Ex. 1003 at ¶ 203 (citing Ex. 1053, Ex. 1054). Petitioner fails to meet their burden to demonstrate the Emerging Threats project was known to an interested POSITA.

5. Petitioner Improperly Relies on Evidence that Post-Dates the Time of Invention to Allege the Emerging Threats Project Was Known to an Interested Skilled Artisan at the Critical Time

Petitioner attempts to use a Centripetal press release (Ex. 1082) as evidence that a skilled artisan would have known about the Emerging Threats project and would have sought out the Emerging Threats reference. Pet. at 35-36 (citing Ex. 1082). Petitioner alleges that a “POSA would have known about the rules published in Emerging Threats by 2010.” Pet. at 36. But, Petitioner ignores its evidence's key

flaw: the Centripetal press release appears to be dated “August 19, 2014”, which is four years after the alleged December 2, 2010 publication date and well after the effective filing date of the '343 Patent. Ex. 1082 at 1. The Centripetal press release is therefore not contemporaneous with the Emerging Threat reference, and cannot demonstrate whether a POSITA would have considered Emerging Threats as a “prominent” or “well-known” channel *at the time of the invention*.

Also, while the Centripetal press release characterizes the Emerging Threats project as being originally “[f]ounded in 2003 as a cyber security research community,” the press release is silent as to when the project allegedly became known as the “de facto standard in network-based malware threat detection.” *Id.* at 2. Because the Centripetal press release post-dates the '343 Patent and is silent on key dates about Emerging Threat's alleged popularity, its mention of the Emerging Threats project provides little insight into how well-known the Emerging Threat reference would have been to a POSITA before the critical time period.

* * *

The Board should, therefore, deny institution because each ground relies on a reference that is not a prior art printed publication.

B. Petitioner Has Not Shown that Sourcefire in view of Emerging Threats Discloses “applying ... at least one packet transformation function configured to prevent an exfiltration operation” Based on a Determination That an Application Header Field Value Matches Second Criterion Specified by an Operator

The Office recognized that a key distinction over *Sourcefire* was its failure to disclose “any techniques for preventing a class of network threats known as ‘exfiltrations.’” Ex. 1085 at 119 (noting that the ’193 Patent claims are “explicitly directed to preventing exfiltrations rather than intrusions”); *see also id.* at 10-13 (noting that “Sourcefire does not identify exfiltration as a problem and does not disclose or suggest Centripetal’s claimed solution to this problem.”); *id.* at 5-7. Exfiltration refers to cybersecurity attacks that hijack a computer on a network in an attempt to send information to hackers. Ex. 1001 at 1:28-31, 2:54-58.

As the Patent Owner explained, the ’343 Patent, like the ’193 Patent and unlike the ’552 Patent, prevents exfiltration, and *Sourcefire* does not teach preventing exfiltration. Ex. 1085 at 138-40, 11-14. In response, the Office agreed that the claims of the ’193 Patent were different from the claims of the ’552 Patent and confirmed the patentability of the ’193 Patent claims over *Sourcefire*. *Id.* at 1-7. Indeed, the claims of the ’343 Patent are even more specific than the claims of the ’193 Patent by requiring a packet transformation function that prevents “an exfiltration operation,” further distinguishing from *Sourcefire*’s intrusion detection techniques.

Recognizing that prior proceedings found that Sourcefire does not disclose rules for preventing an exfiltration operation (Pet. at 12-16), Petitioner alleges that “Emerging Threats discloses such operators that perform the same exfiltration protection disclosed and claimed in the ’343 patent.” *Id.* at 23. Specifically, the Petition refers to four rules that purportedly prevent exfiltrations. *Id.* at 37-43. However, Petitioner does not show that any of these rules prevent exfiltrations or that the rules prevent exfiltrations based on an application header field value matching a criterion specified by an operator.

1. The First Three Rules do not Match Any Application Layer Header Field

The first rule (i.e., SID: 2002526) “searches for markings [e.g., ‘TOP SECRET,’ ‘TS,’ or ‘NOFORN’] in HTTP content flowing toward external servers indicating that the information was classified as top secret and not for distribution to foreign nationals.” *Id.* at 39. The second rule (i.e., SID: 2002034) is “configured to detect and block unauthorized transmission of the password file from Unix/Linux systems” by “search[ing] for the beginning of the first line of a Unix/Linux password file.” *Id.* at 40. The third rule (i.e., SID: 2001328) describes blocking “application layer information containing social security numbers with the familiar ‘-XX-XXXX’ ending pattern.” *Id.* While these rules may stop top secret information, password files, and social security numbers from being transmitted outside of a network, these rules do not do so on the basis of *an application header field* value matching criterion

specified by an operator, as required by the claims. Petitioner does not claim that they do.

To the extent Petitioner argues that “the Board found in the ’552 IPR that Sourcefire discloses applying an operator that specifies one or more application-header-field-value criteria and a packet transformation function,” Petitioner fails to explain how the three rules above would be combined with the operator the Board previously found in the ’552 Patent IPR. Pet. at 58. These three rules are explicitly crafted to alert an administrator when sensitive data is transmitted outside of a protected network. Petitioner does not explain why a POSITA would have imported these rules into Sourcefire and then modified them to *also* target an “application header field value,” as claimed. The unaccounted for modifications to these rules would alter the “principle of operation” behind them, without Petitioner having explained what would have motivated a POSITA to make such a modification.

Issue preclusion does not bar Patent Owner’s arguments that the combination of Sourcefire and Emerging Threats do not disclose or suggest an operator that specifies one or more application header field value criteria. *Id.* at 45 (“[T]he finding[] that Sourcefire . . . teaches materially similar elements of the ’552 patent claims are binding here.”); *id.* at 58. The standard for finding collateral estoppel is strict and requires the identical issues to be decided in the first action:

[1] that in the prior action the party against whom estoppel is sought had a full and fair opportunity to litigate the issue; [2] the issue was actually litigated; [3] the controlling facts and applicable legal rules were the same in both actions; [4] resolution of the particular issue was essential to the final judgment in the first action; and [5] the identical issue was decided in the first action.

Comair Rotron, Inc. v. Nippon Densan Corp., 49 F.3d 1535, 1537 (Fed. Cir. 1995) (citations omitted). Because the '552 Patent does not recite at least “determining, based on an application header field value, the second portion of packets based on whether the first portion of packets comprises data corresponding to second criterion specified by one or more operators specified by the at least one matching packet-filtering rule,” the issue of whether Sourcefire discloses determining whether an application header field value matches second criterion specified by an operator was not (and could not have been) litigated in IPR2018-01436. The applicable legal rules are also not the same because the Board applied the broadest reasonable interpretation (“BRI”) standard in IPR2018-01436 whereas it applies the *Phillips* standard here. *Phillips v. AWH Corp.*, 415 F.3d 1303 (Fed. Cir. 2005) (en banc).

2. The Fourth Rule Does Not Prevent Exfiltration Operations

The fourth rule (i.e., SID: 2003021) does not prevent exfiltration operations. This rule, as characterized by Petitioner, “checks whether an ongoing SSL connection was established, and whether an application header field value indicates

the transmission of application data via SSL v3.0.” Pet. at 42. Petitioner concludes that “this rule detects, and could be tuned to block, attempts to exfiltrate data from a network using an out-of-date encryption protocol and an unusual server port.” *Id.* at 43. Petitioner does not attempt to explain what about this rule is related to prevent an exfiltration operation.

Exfiltrations are difficult to detect because they appear as normal network traffic to observers, such as conventional cyber defense systems. Ex. 1001 at 1:28-36. However, the fourth rule (i.e., SID: 2003021) does not monitor normal traffic. By Petitioner's own admission, this fourth rule monitors traffic on unusual ports and alerts based on an SSL version being used on an unusual port. Pet. at 41. This rule serves to flag traffic having this SSL version and sent via those ports regardless of whether the application header field values indicate that the traffic is a potential exfiltration or not. The rule only assesses an encryption version used, omitting any criteria configured to prevent exfiltrations as opposed to other outbound traffic. *Id.* at 42. Therefore, the fourth rule (e.g., SID: 2003021) is not “configured to prevent an exfiltration operation” while allowing regular network traffic to pass unabated.

C. Petitioner's Obviousness Analysis is Tainted by Impermissible Hindsight Bias

Petitioner's analysis is also tainted by hindsight bias because Petitioner reveals that it used the '343 Patent to find an example of an exfiltration rule. Specifically, Petitioner used the '343 Patent's disclosure of the “REQUIRE-TLS”

operator to find the proverbial needle in the haystack of 11,000+ Snort rules. Pet. at 43, 53, 55. This approach represents a form of prohibited reliance on hindsight. *Mintz v. Dietz & Watson, Inc.*, 679 F.3d 1372, 1377-78 (Fed. Cir. 2012) (rejecting the use of “the invention to define the problem that the invention solves” because “[o]ften the inventive contribution lies in defining the problem in a new revelatory way.”); *see also Ortho-McNeil Pharm., Inc. v. Mylan Labs., Inc.*, 520 F.3d 1358, 1364 (Fed. Cir. 2008) (discounting an expert’s testimony as “simply retrac[ing] the path of the inventor with hindsight” as “always inappropriate for an obviousness test . . .”).

Because Petitioner’s purported showing of obviousness is unsupported by any knowledge that was within the level of ordinary skill at the time the claimed invention was made, and instead relies on knowledge gleaned only from the ’343 Patent’s disclosure, Petitioner’s analysis is impermissibly tainted by hindsight bias and should be rejected.

VI. CONCLUSION

For all of these reasons, Patent Owner accordingly requests that the Board deny institution of *inter partes* review of the Challenged Claims of the ’343 Patent.

Patent Owner's Preliminary Response
IPR2023-00446 (U.S. Patent No. 10,567,343)

Respectfully submitted,

Dated: May 9, 2023

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(Case No. IPR2023-00446)

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CERTIFICATE OF COMPLIANCE WITH 37 C.F.R. § 42.24

The undersigned hereby certifies that the portions of the foregoing PATENT OWNER'S PRELIMINARY RESPONSE specified in 37 C.F.R. § 42.24 has 12,113 words in compliance with the 14,000 word limit set forth in C.F.R. § 42.24(b)(1). This word count was prepared using the Microsoft Word word-processing system used to prepare this paper.

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CERTIFICATE OF SERVICE

The undersigned certifies, in accordance with 37 C.F.R. § 42.6(e), and pursuant to agreement by the parties that filing with the Board through the Patent Trial and Appeal Case Tracking System (P-TACTS) constitutes electronic service, that service was made on Petitioner as detailed below.

<i>Date of service</i>	May 9, 2023
<i>Manner of service</i>	Electronic Filing with the Board
<i>Documents served</i>	PATENT OWNER'S PRELIMINARY RESPONSE
<i>Persons Served</i>	REED SMITH LLP Gerard M. Donovan Peter J. Chassman Walter M. Egbert Jonathan I. Detrixhe Sidharth Kapoor gdonovan@reedsmith.com pchassman@reedsmith.com wegbert@reedsmith.com jdetrixhe@reedsmith.com skapoor@reedsmith.com

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