

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CROWDSTRIKE, INC.,
Petitioner

v.

SKYSONG INNOVATIONS, LLC,
Patent Owner

Inter Partes Review Case No. IPR2025-01170
U.S. Patent No. 11,892,897

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

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I. INTRODUCTION

Patent Owner's ("PO") motion for discretionary denial turns prominently on two arguments. First, PO insists the Petition rehashes a key reference the Office has already considered. Ground 1 is a single reference obviousness theory based on *Sabottke*. PO makes much of the '897 Patent specification distinguishing its alleged invention from the work described by *Sabottke*. But the purported distinction between *Sabottke* and the '897 Patent was not captured by the claims. Accordingly, the Examiner materially erred by accepting the application's characterizations and failing to reject claims that were not in fact distinct from *Sabottke*'s work.

Second, PO insists that it has settled expectations resulting from an alleged meeting "more than six years ago" during which an inventor claims to have offered to license the '897 Patent. PO argues that settled expectations are supported by Petitioner's actions following the meeting because it failed to license the patent or challenge its validity. Importantly, PO puts forth no evidence to substantiate this alleged offer to license a then-pending patent application. But even accepting as true this unsubstantiated account of the inventor's interactions with former CrowdStrike employees, the '897 Patent did not issue until February 2024. Accordingly, there was no patent to license and no claims to challenge. Less than one year after issuance, PO was assigned the issued patent and, two days later, filed suit against

Petitioner. Petitioner then promptly filed its petition five months after service and only 17 months after issuance.

This record falls far short of supporting discretionary denial.

II. INSTITUTING CROWDSTRIKE’S PETITION IS AN APPROPRIATE USE OF BOARD RESOURCES

A. The Patent Office Erred in a Manner Material to Patentability When it Allowed the ’897 Patent

Instituting CrowdStrike’s IPR is “an appropriate use of Board resources to review” material errors¹ to the patentability of the Challenged Claims that the Patent Office made during examination. *Skullcandy Inc. v. Earin AB*, IPR2025-00690, Paper 9 at 2 (PTAB July 31, 2025). The Board’s interest in reviewing such errors can even supersede other factors (e.g., strong settled expectations). *Id.* at 2; *see also TSMC Ltd. v. Marlin Semiconductor Ltd.*, IPR2025-00847, Paper 11 at 2–3 (PTAB Sept. 3, 2025) (material error outweighed settled expectations of a 15-year-old patent and a final decision issuing before parallel ITC trial). Material error is established if “[1] the asserted prior art was not a basis for rejection during examination, [2] is not

¹ PO’s argument that “the Petition does not address [§325(d)], nor does it allege any error in the Examiner’s analysis” (Paper 8 at 17) ignores the Board’s explicit guidance that “[t]he petition should not address discretionary issues.” *See* April 25, 2025 FAQs for Interim Processes for PTAB Workload Management, FAQ 25.

substantially the same as prior art the Examiner applied, and [3] includes specific teachings that ‘impact patentability of the challenged claims.’” *Ecto World, LLC v. RAI Strategic Holdings, Inc.*, IPR2024-01280, Paper 13 at 5 (PTAB May 19, 2025) (precedential). Failing to issue a rejection based on *Sabottke* satisfies all three.

Regarding the first two factors, no Office Action advanced *Sabottke* or on any art substantially the same as *Sabottke*. All Office Actions turned on the Seiver and Titonis references. EX1002, 351-56, 456-68. As the Applicant argued, both references failed to teach “predicting a likelihood of exploitation of a vulnerability discussed online prior to disclosure to a public database or prior to actual exploitation of the vulnerability.” *Id.* at 480-81. The Applicant stressed that both references utilized “known software vulnerabilities” that had already been made public. *Id.* at 480-481. In stark contrast, *Sabottke* expressly teaches methods that “characterize the landscape of threats related to information leaks about vulnerabilities *before* their public disclosure.” EX1004, 3 (emphasis added).

Turning to the third factor, *Sabottke*’s teachings impact patentability of the Challenged Claims. *Sabottke*’s system actively scouts hacker communications in Twitter feeds to predict the likelihood a vulnerability will be exploited *before* disclosure to a vulnerability database. Paper 1 at 24-27. Thus, it provides the precise teaching that was missing from the art advanced during prosecution, and the Examiner’s failure to reject the claims with *Sabottke* was an error material to the

patentability of the Challenged Claims. Importantly, the Examiner's error was likely caused by the '897 Patent's discussion that inaccurately characterized *Sabottke* as distinct from the '897 alleged invention. As PO admits, "*Sabottke* was expressly cited and distinguished." Paper 13 at 16. PO points specifically to the patent's discussion at 15:35-46 in which the '897 Patent distinguishes its alleged invention from "recent works on using vulnerabilities mentioned on twitter to predict if such vulnerabilities would be exploited or not." *Id.* This portion of the '897 Patent specification does appear to refer to the *Sabottke* reference, which is titled "Vulnerability Disclosure in the Age of Social Media: Exploiting Twitter for Predicting Real-World Exploits." But the specification's attempt to distinguish the *Sabottke* approach from the '897 Patent's alleged invention is, critically, ***not reflected in the claims***. The sole stated difference this portion of the specification draws out between the Twitter system of *Sabottke* and the '897 Patent's alleged invention is that *Sabottke* "use[s] Support Vector machine (SVM) as [a] classifier" while the '897 Patent "works best with Random Forest classifier." EX1001, 15:35-46. But the vast majority of claims are agnostic to the specific classifier. Indeed, only dependent claim 16 is expressly limited to "Random Forest" methods. As established in the Petition, the Examiner should have recognized that *Sabottke* teaches all the elements of at least Claim 1 and therefore erred by not rejecting the claims based on *Sabottke*.

As the Director has recognized, “overlooking the teachings of” the prior art establishes “that the Office erred in a manner material to the patentability of the challenged claims.” *Microsoft Corp. v. Partec Cluster Competence Center GmbH*, IPR2025-00318, Paper 9 at 3 (PTAB June 12, 2025). Thus, “it is an appropriate use of Office resources” to review the Examiner’s error during the examination of the ’897 Patent. *Id.*

B. PO has not Developed Settled Expectations in the ’897 Patent

PO “has not developed strong settled expectations” that the ’897 Patent would not be challenged because the ’897 Patent has “not been in force for a significant period of time[.]” *Microsoft Corp. v. Edge Networking Sys., LLC*, IPR2025-00617, Paper 12 at 2 (PTAB July 31, 2025). The ’897 Patent issued less than two years ago: February 6, 2024. The Director has repeatedly found that Patent Owners do not have any settled expectations in such recently issued patents. *See, e.g., Klein Tools, Inc. v. Milwaukee Elec. Tool Corp.*, IPR2025-01018, Paper 14 at 2 (Director Oct. 10, 2025) (no settled expectations for challenged patent that issued in 2024); *Straumann USA, LLC v. Smart Denture Conversions, LLC*, IPR2025-00956, Paper 11 at 2 (Director Sept. 19, 2025) (no settled expectations for challenged patent that reissued in 2024). Likewise, the Director has repeatedly found early challenges like CrowdStrike’s “weigh against discretionary denial.” *See, e.g., MIM Software Inc. v. Progenics Pharms., Inc.*, IPR2025-00630, Paper 13 at 2 (PTAB July 24, 2025)

(emphasizing that “early challenges favor robust, predictable patent rights and weigh against discretionary denial” and denying requests for discretionary denial of IPRs against patents issued between 2020 and 2024); *Microsoft v. Edge*, Paper 12 at 2.

While PO admits the '897 Patent has been in force for only 20 months, PO nonetheless argues it has settled expectations in the '897 Patent's validity because it “belongs to a mature patent portfolio with roots dating back to 2014.” Paper 8 at 13. Critically, this alleged “patent portfolio” consists of legally unrelated patents, which PO seeks to treat collectively by characterizing them as “cybersecurity innovations.” Paper 8 at 13-14. This attempted bundling falls flat. PO's own descriptions of the Asserted Patents emphasize their complex and disparate subject matter. EX2001, 24 ('385 Patent covers “security game frame-work...that models an attacker based on exploit market data”), 29 ('721 Patent covers “accessing different kinds of content with different browser instances”), 34 ('900 Patent covers “assigning one or more labels or tags related to various discussion topics”), 39 ('831 Patent covers “reducing the amount of total computation in [convolutional neural networks]”), 44 ('897 Patent covers “assessing the likelihood of exploitation of software vulnerabilities”). Contradicting PO's arguments based on a manufactured throughline for these unrelated patents, their disparate coverage weighs against discretionary denial. As the Director has held, asserting a “large number and vast scope of patents...weighs against discretionary denial.” *Tesla, Inc. v. Intellectual Ventures II LLC*, IPR2025-

00217 Paper 9 at 3 (PTAB June 13, 2025) (refusing discretionary denial because district court proceedings “involve[d] eleven patents spanning nine different families that involve a diverse range of subject matter.”). Here too, “the Board is better suited to review” the five distinct patents here “involving diverse subject matter.” *Id.*

Even if the Director were to accept PO’s proposed bundling, time does not favor settled expectations. The earliest provisional application for an Asserted Patent was *filed* in 2014, and no patent issued until June 4, 2019. *Id.* The Director has found that settled expectations have not vested in such nascent patent families. *See, e.g., TankLogix, LLC v. SitePro, Inc.*, IPR2025-00647, Paper 10 at 2–3 (PTAB July 31, 2025) (patents issued between 2019 and 2023 had “not been in force for a significant amount of time” so “Patent Owner [had] not developed strong settled expectations”).

In PO’s final attempt to leverage the improper bundled patents, it contends that a “history” of the patents issuing over the last six years has “encourag[ed] Skysong and ASU to invest in commercialization without the specter of invalidity threats.” Paper 8 at 14. But Skysong was not even assigned the ’897 Patent until January 29, 2025—just *two days* before PO sued both CrowdStrike and Fortinet. EX1030 (Assignment). And PO presents no evidence that any entity, including ASU, has “invest[ed] in commercialization” of the ’897 Patent’s claimed invention. Indeed, PO has not identified any purported commercial embodiments of the ’897 Patent’s claimed invention, and Skysong’s own website states that its focus is on

licensing, not commercialization.² Failing to commercialize “weighs against [a] PO’s claim of strong settled expectations.” *Shenzen Tuozhu Technology Co., LTD, v. Stratasy, Inc.*, IPR2025-00438, Paper 10 at 3 (PTAB July 17, 2025).

PO’s final settled expectation argument also fails. PO points to an alleged conversation in 2019 between a named inventor and then-employees of CrowdStrike, insisting this established “actual notice” of “ASU’s provisional patents.” Paper 8 at 14-15. As an initial matter, there is no evidence that any CrowdStrike representatives gained knowledge of this provisional application. Inventor Shakarian refers to “slide materials that [he] *typically*” used (EX2002, ¶9), but he does not contend that copies of these slides were provided to the alleged attendees. Turning to the substance of PO’s reliance, it argues that CrowdStrike’s failure to “pursue licensing” or to promptly challenge the patent’s validity support PO’s settled expectations. Fatal to PO’s argument, there was nothing to license and no claimed invention to question at the time of this alleged meeting. Even assuming there was actual notice of a patent application in 2019, that application was not public. Accordingly, CrowdStrike could not have ascertained what, if any, claim scope was being pursued at the time. As importantly, the ’897 Patent did not issue for another *five years*. Courts routinely find pre-issuance communications insufficient to establish knowledge of a later issued patent. *See BillJCo, LLC v. Apple*

² See <https://skysonginnovations.com/industry/>.

Inc., 583 F. Supp. 3d 769, 776 (W.D. Tex. 2022) (according no weight to allegation that June 2019 letter provided notice of patent that issued in November 2019).

Put simply, there are no settled expectations of validity because the '897 Patent's claim scope was finalized only 17 months before the Petition was filed.

III. PATENT OWNER'S REMAINING DISCRETIONARY DENIAL ARGUMENTS ARE MERITLESS

A. Judge Gilliland's Prior Stay Decisions Confirm a Stay is Likely

CrowdStrike intends to move for a stay if its IPR proceedings are instituted. PO argues that it is unlikely the Court would grant a stay. Paper 8 at 8. In support, PO cites just two cases in the Western District: *Quantum Imaging* and *Yondr*. *Yondr* was decided by a different judge in the district. PO fails to wrestle with this disparity and provides the Director no reason to assume all judges in the district will rule similarly. While the other decision, *Quantum Imaging*, was decided by the correct judge (Gilliland), the factual record there stands in stark contrast to this case. As PO admits, judges in the Western District of Texas have denied motions for stay "when claim construction / discovery are complete and trial is approaching." *Id.* That was the case in *Quantum Imaging*. EX1031, *Quantum Imaging*, Dkt. 357, 3–4 (observing that a *Markman* hearing had concluded, fact and expert discovery were closed, dispositive and *Daubert* briefing was complete, and the parties were finalizing their Joint Pretrial Order and Submissions). The circumstances here are unlike *Quantum Imaging*. When this proceeding is instituted and CrowdStrike moves to stay the

litigation, no *Markman* hearing will have been conducted and fact discovery will not have begun. Ex. 1004, 2. This case is more analogous to the *VOIP-PAL.com* decision in which Judge Gilliland **granted** a stay.

In *VOIP-PAL.com, Inc. v. Samsung Elecs. Co., Ltd.*, No. 6:21-cv-01246 (W.D. Tex. Nov. 30, 2021), Judge Gilliland granted a motion to stay where the close of fact discovery was just three months away and a *Markman* hearing had already been held more than a month and a half earlier. EX1032, *VOIP-PAL*, Dkt. 46, at 5. As Samsung observed, the Western District “has granted stays in light of IPR proceedings when a motion to stay was filed after the *Markman* hearing took place but the parties had only begun written discovery and no depositions had been taken.” *Id.* (citing *Sonrai*, 2022 WL 3108818, at *3 and *Kirsch*, 2021 WL 4555804 at *1–2). The circumstances here are more favorable for a stay than those in *VOIP-PAL*. As PO admits, the *Markman* hearing is currently scheduled to occur **after** the Board’s February 8, 2026, deadline to issue its institution decision in this proceeding. Paper 8 at 10. Moreover, contrary to PO’s claim, at the deadline for institution, fact discovery will not be “well underway.” *Id.* In reality, fact discovery will not have even **opened**. EX2004, 2 (noting that fact discovery opens on February 19, 2026). Thus, because the Parallel Litigation is in an even earlier stage than *VOIP-PAL*, it is very likely that Judge Gilliland will grant CrowdStrike’s motion to stay.

Accordingly, *Fintiv* Factor 1 weighs against discretionary denial.

B. Trial Likely Will Not Occur Until February 2028 Based on the District-Wide Time-to-Trial Statistics—Approximately 13 Months After a Final Written Decision is Expected in This Proceeding

The underlying litigation is pending before Judge Counts in the Western District of Texas (“WDTX”) and has been referred to Judge Gilliland. The USPTO’s March 24, 2025 Memorandum states that “in applying *Fintiv*, the Board may consider any evidence that the parties make of record that bears on the proximity of the district court’s trial date[.]” While the current scheduling order sets trial for February 1, 2027, just one week before the anticipated final written decision, the median time to trial in this District strongly suggests the actual trial date will fall well after the final written decision. The current median time-to-trial in WDTX is ~36 months. EX1033 (National Judicial Caseload Profile), 2. Applying that time period to the Parallel Litigation, trial is likely to begin in February 2028—approximately *12 months after* a final written decision is expected in this proceeding. Applying these statistics, *Fintiv* Factor 2 weighs strongly against discretionary denial.

Moreover, CrowdStrike has filed a motion seeking the transfer of the Parallel Litigation to the Northern District of California (“NDCA”) or in the alternative to the Austin Division of WDTX pursuant to 28 U.S.C. § 1404(a). EX1034 (CrowdStrike’s Motion to Transfer). While PO has indicated it will oppose CrowdStrike’s motion, Judge Gilliland’s history with transfer motions in patent

cases suggests he will grant CrowdStrike's motion. Of the 22 §1404(a) transfer motions that Judge Gilliland has considered, he has granted nine of them. EX1035 (Judge Gilliland's Docket Navigator Page). Those nine granted motions share critical operative facts with CrowdStrike's motion, strongly suggesting that Gilliland will grant transfer here. For example, CrowdStrike has shown that it has zero employees and no offices in the Midland-Odessa division. EX1034, 3. CrowdStrike has also shown that the compulsory process secures attendance of multiple non-party entities by transferring to NDCA, a private interest factor that favors transfer. *Compare* EX1036, *Virtamove, Corp. v. Google LLC*, No. 7:24-cv-00033-DC-DTG, Dkt. 86 at *2-5 (W.D. Tex. Jan. 22, 2025) (granting transfer to NDCA because private interest factors favored transfer, including "identif[ying] several non-party witnesses in NDCA"), *with* EX1034 (CrowdStrike's Motion to Transfer), 9-10. CrowdStrike has also demonstrated local interest in NDCA since its principal place of business is in NDCA. EX1034, 9. Having a principal place of business within the proposed venue and a lack of connection to the present venue favors transfer. EX1037, *Mobile Data Technologies LLC, v. Meta Platforms, Inc.*, No. 7:22-cv-00244-ADA-DTG, Dkt. 83 at *5-6 (W.D. Tex. Dec. 18, 2023) (granting transfer to NDCA because public interest factors favored transfer, including defendant having its "principal place of business" in NDCA and neither plaintiff nor defendant "hav[ing] any connection to" WDTX). And while docket congestion comparisons

between NDCA and WDTX have disfavored transfer in the past, the Federal Circuit recently concluded that, as is the case here, this factor should not be accorded any weight when the plaintiff “is not engaged in product competition in the marketplace and is not threatened in the market in a way that, in other patent cases, might add urgency to case resolution.” *In re Google LLC*, 58 F.4th 1379, 1383 (Fed. Cir. 2023). Moreover, in the single case where a plaintiff filed objections to Judge Gilliland’s grant of transfer, Judge Counts *overruled* that objection and the Federal Circuit denied the plaintiff’s petition for writ of mandamus. EX1038, *Virtamove*, Dkt. 102. Importantly, when this case is transferred, a new schedule will eventually be set, a stay motion will be filed and almost certainly granted, and any trial will occur long after the final written decision.

Fintiv Factor 2, therefore, weighs against discretionary denial. Consequently, *Fintiv* Factor 5 also weighs against discretionary denial. *See, e.g., BOE Tech. Grp. Co., Ltd. v. Optronic Scis. LLC*, IPR2024-01130, Paper 16 at 13 (PTAB Jan. 27, 2025) (Factor 5’s weight for or against denial follows Factor 2).

C. Minimal Investment in the Parallel Litigation Weighs Against Discretionary Denial

The Parallel Litigation is in its early stages. As PO recognizes, one key consideration in determining how to weigh this factor is whether, at the time of institution, “the district court has issued substantive orders related to the patent at issue in the petition,” including the issuance of a claim construction order. Paper 8

at 9–10 (quoting *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 at 9–10 (PTAB Mar. 20, 2020)). At the time of institution here, neither a claim construction order nor any other substantive order relating to the '897 Patent will have issued. As PO admits, the parties *Markman* hearing will not occur until February 18, 2026—10 days *after* the deadline for institution. *Id.*, 10. Nor are any other substantive decisions expected by the deadline for institution.

The work that the parties had completed when PO filed its discretionary denial brief was not substantial. Beyond the completion of PO's preliminary infringement contentions and CrowdStrike's preliminary invalidity contentions, the only work that had been done relates to routine procedural events (e.g., holding a pretrial conference, issuing a scheduling order) and non-substantive motion practice (e.g., CrowdStrike's transfer motion). *Id.* The schedule disputes PO's claims that substantial effort "will have been committed" to the Parallel Litigation at the time this proceeding is instituted. *Id.* The deadline for joinder of parties will not take place until more than a month after institution, and, contrary to PO's claims, fact discovery will not "be well underway." *Id.* Fact discovery will not even open until 11 days *after* institution. *Id.*; EX2004, 2 (identifying February 19, 2026, as the date that fact discovery opens). Thus, the only work identified by PO that will occur by institution is the parties' preparation of their claim construction briefing. Paper 10 at 10. But a

claim construction order, not the completion of briefing, is the proper metric for assessing *Fintiv* Factor 3. *Fintiv*, Paper 11 at 10.

Fintiv Factor 3, therefore, weighs against discretionary denial.

D. CrowdStrike’s *Sotera+* Stipulation Mitigates Any Remaining Overlap Concerns Between this IPR and the Litigation

To mitigate the possibility that there will be overlap between the issues in this proceeding and the parallel litigation, CrowdStrike filed a broadened *Sotera+* stipulation. EX1029. If the PTAB institutes this proceeding, CrowdStrike’s stipulation precludes it from pursuing in the parallel litigation against the claims challenged in this IPR:

(i) the specific grounds raised in IPR2025-01170, (ii) any other grounds that could have reasonably been raised before the PTAB in that instituted proceeding (i.e., any ground that could have reasonably been raised under §§ 102 or 103 on the basis of prior art patents or printed publications), or (iii) any ground based on a combination of system prior art and the references asserted as part of a ground raised in IPR2025-01170, as reflected in the table summarizing the Statutory Grounds for Challenges on pages 4-5 of the Petition.

Id., 2. Thus, CrowdStrike’s stipulation negates **any** concern that any issue before the Board in this proceeding will be relitigated in the parallel proceeding. *Fintiv* Factor 4, therefore, weighs strongly against discretionary denial. *See, e.g., Tesla, Inc. v. Intellectual Ventures II LLC*, IPR2025-00217 Paper 9 at 2 (PTAB June 13, 2025) (finding that Tesla’s broad *Sotera+* stipulation “counsel[s] against discretionary denial”).

PO nonetheless contends that *Fintiv* Factor 4 favors discretionary denial because CrowdStrike's broadened *Sotera+* stipulation "does not mitigate overlap." Paper 8 at 12. But PO's arguments in support of that conclusion are inapposite. First, PO points to the parties' investment in the Parallel Litigation. *Id.* But that is a *Fintiv* Factor 3 analysis, which is not relevant to the "overlap" the Director considers for *Fintiv* Factor 4. *See Fintiv*, IPR2020-00019, Paper 11 at 9-13. Second, PO mischaracterizes CrowdStrike's stipulation as "conditional," suggesting it should be discounted because CrowdStrike reserves its right to pursue the IPR grounds at the district court *if* the Board institutes review, but then vacates institution. *Id.* PO cites no authority for the proposition that a petitioner must give up IPR grounds even if the IPR proceeding is vacated after institution. Nor is there any apparent policy rationale to impose such a gotcha requirement on petitioners. *Fintiv* Factor 4 weighs heavily against discretionary denial.

E. CrowdStrike's Petition is Supported by an Exemplary Expert Declaration and Demonstrates the Claims are Unpatentable

PO incorrectly asserts that CrowdStrike's Petition "over-relies on expert testimony," favoring denial. Paper 8, 15, 17-18. In fact, each ground in the Petition properly specifies, with supporting expert testimony, where each element of each claim is found in the prior art. *See generally* Paper 1, 15-74; EX1003. When a combination of references is relied on to establish the obviousness of a particular limitation, the Petition presents detailed, specific reasons supported by expert

testimony, showing why a POSITA would have been motivated to combine the prior art as proposed and would have had a reasonable expectation of success in making the proposed combinations. *See, e.g.*, Paper 1, 38-40; EX1003, ¶¶95-102. In sum, CrowdStrike’s unpatentability challenges, supported with extensive expert testimony that is, itself, supported by objective evidence, are quite strong. *See Tesla, Inc. v. Charge Fusion Techs., LLC*, IPR2025-00032, Paper 11 at 39 (PTAB May 19, 2025) (“[A]pplaud[ing]” Petitioner and the expert for “leav[ing] virtually none of the substance of his testimony unsupported by objective evidence” by supporting its Petition with a 278 page expert declaration containing extensive explanations “with citations to dozens of pieces of objective evidence”).

Beyond general observations that Petitioner’s expert declaration is comprehensive, PO fails to identify any specific reliance on expert testimony that it characterizes as improper. However, PO does allege that the Petition’s proposed grounds are weak in a few specific ways independent of any over-reliance on expert testimony. Paper 8 at 16. None of these allegations has merit. Regarding Ground 1, PO cites alleged shortcomings of *Sabottke*. *Id.* Specifically, PO claims that *Sabottke* “disclaims pre-disclosure or zero-day prediction” and thus falls short of teaching the claimed invention, which “enables proactive, pre-disclosure exploit prediction using diverse cyber threat intelligence sources.” *Id.* However, this does not comport with PO’s description of “before disclosure” to the Examiner. To gain allowance, PO

argued the prior art failed to teach this element because it did not “discuss predicting a likelihood of exploitation of a vulnerability discussed online prior to disclosure to a public database or prior to actual exploitation of the vulnerability.” EX1002, 480. This is precisely what *Sabottke* teaches. Paper 1 at 24-27. The Petition proactively traverses this argument, establishing that while *Sabottke* “does not assess non-public vulnerabilities,” such as zero-day attacks, it does “look at vulnerabilities mentioned publicly (e.g., on twitter), but that have not been reported to public vulnerability databases like NVD or ExploitDB.” *Id.* That is, *Sabottke* aligns precisely with the Applicant’s characterization of “before disclosure” to the Office. It teaches “predicting a likelihood of exploitation of a vulnerability discussed online prior to disclosure to a public database.” PO’s shifting sand approach to its claimed invention lacks merit and should be rejected.

Turning to Grounds 2–6, PO attacks the Petition’s reliance on *Smyth* and *Phillips*. Paper 8 at 16. PO contends *Smyth* “focus[es] on post-disclosure databases...not pre-disclosure analysis[.]” *Id.* This directly contradicts *Smyth*’s express disclosure of scouting online discussions based on “current vulnerability information 125 [which] contains vulnerability information about a threat that is newly discovered.” *Smyth*, 11:1-8. PO’s critique of *Phillips* fares no better. PO argues that *Phillips* fails to teach predictive modeling. Paper 8 at 16. But the Petition does not rely on *Phillips* for teaching predictive modeling; it relies on *Smyth* for that

limitation. Paper 1 at 38–39, 43. PO also attacks the *Smyth* grounds under *Advanced Bionics*, asserting that these simply rehash disclosed art. Paper 8 at 17. PO’s critique fails to wrestle with the fact that *Smyth*, the base reference in these grounds, was **not** cited during prosecution. Critically, *Smyth* provides the very teaching missing from the art of record. See Section II.A, *supra* (explaining that the two references advanced during prosecution failed to a pre-disclosure analysis). Accordingly, these grounds are not cumulative of the art previously considered and the Board need not reach Part 2 of the *Advanced Bionics* framework. *Advanced Bionics*, IPR2019-01469, Paper 6 at 10.

Finally, PO cites, without substantive discussion, a 14-page span of CrowdStrike’s Petition and argues that “[t]he Petition offers no credible rationale why a POSITA would combine [the prior art] to achieve pre-disclosure prediction[.]” Paper 8 at 17. Critically, the Petition relies exclusively on *Smyth*—the base reference in the combination—for its pre-disclosure prediction teaching. Petition, 50-51. The Petition expressly sets forth how *Smyth*’s system, modified as proposed for the preceding limitations, teaches the claimed pre-disclosure prediction. *Id.*, 51. Consequently, no rationale to combine or modify *Smyth* with any other reference to teach pre-disclosure prediction is required. *Id.*

F. National Security Interests Favor Institution of CrowdStrike's IPR of the '897 Patent, not Discretionary Denial

PO correctly observes that national security interests bear on institution, but wrongly concludes that national security favors discretionary denial. Paper 8 at 18. As the Improving the Nation's Cybersecurity executive order explained, "[t]he private sector must adapt to the continuously changing threat environment...and partner with the Federal Government to foster a more secure cyberspace[.]" EX2007, § 1. The continued enforcement of the '897 Patent—which CrowdStrike has shown issued as a result of material error and is invalid (*supra* Sections II.A, III.E)—undermines the government's directive. For example, PO does not allege that PO has commercialized any product utilizing the '897 Patent's alleged invention. As a threshold matter, to serve as a national security interest, the '897 Patent's alleged invention needs to be commercialized. Without implementation, no national security interest is furthered. To the contrary, preventing domestic companies from protecting private and public computer systems by asserting an invalid patent is directly contrary to express national security interests.

IV. CONCLUSION

For at least these reasons, CrowdStrike respectfully requests that the Board deny PO's request for discretionary denial.

Respectfully submitted,

BY: /s/ Paul R. Hart
Paul R. Hart, Reg. No. 59,646

COUNSEL FOR PETITIONER

APPENDIX OF EXHIBITS

Exhibit 1001	U.S. Patent No. 11,892,897 (“’897 Patent”)
Exhibit 1002	File History of the ’897 Patent (“’897 File History”)
Exhibit 1003	Declaration of Dr. Nicholas Bambos (“Dec.”)
Exhibit 1004	Carl Sabottke et. al., <u>Vulnerability Disclosure in the Age of Social Media: Exploiting Twitter for Predicting Real-World Exploits</u> , Proceedings of the 24 th USENIX Security Symposium (2015) (“ <i>Sabottke</i> ”)
Exhibit 1005	U.S. Patent No. 10,264,009 to Smyth et al. (“ <i>Smyth</i> ”)
Exhibit 1006	Elizabeth Phillips et al., <u>Extracting Social Structure from DarkWeb Forums</u> , SOTICS 2015: The Fifth International Conference on Social Media Technologies, Communication, and Informatics, (2015) (“ <i>Phillips</i> ”)
Exhibit 1007	Eric Nunes et al., <u>Darknet and Deepnet Mining for Proactive Cybersecurity Threat Intelligence</u> , Proceedings of the 2016 IEEE Conference on Intelligence and Security Informatics (“ <i>Nunes</i> ”)
Exhibit 1008	U.S. Patent No. 10,652,254 to Kuperman et al. (“ <i>Kuperman</i> ”)
Exhibit 1009	Ericsson Marin et al., <u>Product Offerings in Malicious Hacker Markets</u> , Proceedings of the 2016 IEEE Conference on Intelligence and Security Informatics (“ <i>Marin</i> ”)
Exhibit 1010	Mehran Bozorgi et al., <u>Beyond Heuristics: Learning to Classify Vulnerabilities and Predict Exploits</u> , Proceedings of the Sixteenth ACM Conference on Knowledge Discovery and Data Mining (KDD 2010) (“ <i>Bozorgi</i> ”)
Exhibit 1011	<i>Intentionally left blank</i>
Exhibit 1012	U.S. Patent No. 9,294,498 to Yampolskiy et al. (“ <i>Yampolskiy</i> ”)
Exhibit 1013	Victor Benjamin et al., <u>Securing Cyberspace: Identifying Key Actors in Hacker Communities</u> , Proceedings of the 2012 IEEE International Conference on Intelligence and Security Informatics (2012) (“ <i>Benjamin</i> ”)
Exhibit 1014	Declaration of June Munford (“ <i>Munford Dec.</i> ”)
Exhibit 1015	Mitch Macdonald et al., <u>Identifying Digital Threats in a Hacker Web Forum</u> , IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining, (2015) (“ <i>Macdonald</i> ”)
Exhibit 1016	<i>CTC Sentinel</i> , Volume 6, Issue 7 , July 2013. Combating Terrorism Center at West Point. (“ <i>CTC Sentinel</i> ”)
Exhibit 1017	Vivian Fiona Guetler, <u>Exploring Cyberterrorism, Topic Models and Social Networks off Jihadists Dark Web Forums: A</u>

	<u>Computational Social Science Approach</u> , Graduate Theses, Dissertations, and Problem Reports (2022) (“ <i>Guetler</i> ”)
Exhibit 1018	Screenshot of VirusTotal, found at https://www.virustotal.com/getstarted/vulnerability-management , captured June 12, 2025 (“ <i>VirusTotal.com Screenshot</i> ”)
Exhibit 1019	Elizabeth Phillips et al., <u>Applying Social Network Analysis to Security</u> , International Conference on Cyber Security for Sustainable Society (2015)
Exhibit 1020	<i>Intentionally left blank</i>
Exhibit 1021	Barreras et al., <u>Improving Transparency of the Colombian Peace Treaty with NLP</u> (“ <i>Barreras</i> ”)
Exhibit 1022	Tianjun Fu et al., <u>A Focused Crawler for Dark Web Forums</u> , Journal of the American Society for Information Science and Technology (2010) (“ <i>Fu</i> ”)
Exhibit 1023	Victor Benjamin et al., <u>Exploring Threats and Vulnerabilities in Hacker Web: Forums, IRC and Carding Shops</u> , IEEE Intelligence and Security Informatics (2015)
Exhibit 1024	U.S. Patent No. 11,031,135 to Gates et. al (“ <i>Gates</i> ”)
Exhibit 1025	Mohammed Almukaynizi et al., <u>Predicting Cyber Threats through Hacker Social Networks in Darkweb and Deepweb Forums</u> , CSSSA’s Annual Conference on Computational Social Science (2017), (“ <i>Almukaynizi</i> ”)
Exhibit 1026	Thomas J. Holt et al., <u>Examining the Social Networks of Malware Writers and Hackers</u> , International Journal of Cyber Criminology (2012) (“ <i>Holt</i> ”)
Exhibit 1027	Hoa Khanh Dam et al., <u>Automatic feature learning for predicting vulnerable software components</u> , IEEE Transactions of Software Engineering, (2018) (“ <i>Dam</i> ”)
Exhibit 1028	Michel Edkrantz, <u>Predicting Exploit Likelihood for Cyber Vulnerabilities with Machine Learning</u> , Chalmers Univ. of Tech., (2015) (“ <i>Edkrantz</i> ”)
Exhibit 1029	Petitioner CrowdStrike, Inc.’s Notice of Sotera Plus Stipulation
Exhibit 1030	’897 Patent Assignment to Skysong Innovations, LLC (Executed January 29, 2025)
Exhibit 1031	<i>Quantum Imaging, LLC v. Sony Interactive et al.</i> , No. 1:23-CV-1212-ADA-DTG, Dkt. 357 (W.D. Tex. Dec. 4, 2024)
Exhibit 1032	<i>VOIP-PAL.com, Inc. v. Samsung Elecs. Co., Ltd.</i> , No. 6:21-cv-01246, Dkt. 46 (W.D. Tex. Nov. 30, 2021)

Exhibit 1033	U.S. District Courts Median Time to Trial During 12-Month Period Ending June 30, 2025
Exhibit 1034	<i>Skysong Innovations, LLC v. CrowdStrike, Inc. et al.</i> , No. 7:25-cv-00040-DC-DTG, Dkt. 61 (W.D. Tex. Oct. 9, 2025) (Motion to Transfer)
Exhibit 1035	Docket Navigator Page Showing Success Rate of Motions to Transfer for Judge Gilliland
Exhibit 1036	<i>Virtamove, Corp. v. Google LLC</i> , No. 7:24-cv-00033-DC-DTG, Dkt. 86 (W.D. Tex. Jan. 22, 2025) Order Granting Motion to Transfer Venue
Exhibit 1037	<i>Mobile Data Technologies LLC, v. Meta Platforms, Inc.</i> , No. 7:22-cv-00244-ADA-DTG, Dkt. 83 (W.D. Tex. Dec. 18, 2023) Order Granting Motion to Transfer Venue
Exhibit 1038	<i>Virtamove, Corp. v. Google LLC</i> , No. 7:24-cv-00033-DC-DTG, Dkt. 102 (W.D. Tex. May 7, 2025) Order of Transfer

CERTIFICATE OF SERVICE ON PATENT OWNER

Pursuant to 37 C.F.R. § 42.6(e), the undersigned certifies that on November 10, 2025, the foregoing *Petitioner's Opposition To Patent Owner's Request For Discretionary Denial and Exhibits* were served via electronic filing with the Board and via Electronic Mail on the following counsel of record for PO:

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