

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SOPHOS LTD. & SOPHOS INC.,

Petitioners,

v.

OPEN TEXT INC.,

Patent Owner.

Case IPR2023-00633

Patent No. 8,726,389

PATENT OWNER'S PRELIMINARY RESPONSE

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Patent Trial and Appeal Board
U.S. Patent & Trademark Office
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EXHIBIT LIST

Exhibit	Description
2001	Declaration of Professor Nenad Medvidovic, Ph.D.
2002	<i>Curriculum Vitae</i> of Nenad Medvidovic, Ph.D.
2003	<i>Webroot, Inc. and Open Text Inc., v. Sophos LTD</i> , Case No. 6:22-cv-240-ADA-DTG, Complaint (W.D. Tex Mar. 4, 2022)
2004	<i>Sonrai Memory Ltd. v. Kingston Tech. Co. and Kingston Tech. Corp.</i> , Case No. 6:21-cv-1284-ADA, Order Denying Kingston Tech. Co. and Kingston Tech. Corp.’s Opposed Motion to Stay Pending Resolution of <i>Inter Partes</i> Review, Dkt. 94 (W.D. Tex., Oct. 18, 2022)
2005	<i>mCom IP, LLC v. Cisco Systems, Inc.</i> , Case No. 6:22-cv-00261-ADA, Order Denying Defendant’s Motion to Stay Pending <i>Inter Partes</i> Review, Dkt. 42 (W.D. Tex., Oct. 20, 2022)
2006	<i>Intellectual Ventures I LLC et al. v. Hewlett Packard Enterprise Co.</i> , No. 6:21-cv-00596-ADA, Order Denying Hewlett Packard Enterprise Company’s Opposed Motion to Stay Pending Resolution of <i>Inter Partes</i> Review, Dkt. 104 (W.D. Tex., Dec. 22, 2022)
2007	Dani Kass, “Catching Up On Patent Litigation With Judge Albright” (Law360 Mar. 14, 2023); https://www.law360.com/pulse/articles/1582438/print?section=pulse/courts
2008	U.S. District Courts – Combined Civil and Criminal Federal Court Management Statistics (Mar. 31, 2023), <i>available at</i> https://www.uscourts.gov/statistics/table/na/federal-court-management-statistics/2023/03/31-1
2009	<i>Webroot, Inc. and Open Text Inc., v. AO Kaspersky Lab. et al.</i> , Case No. 6:22-cv-243-ADA-DTG, Order Granting Fourth Amended Scheduling Order, Dkt. 160 (W.D. Tex. Jan. 22, 2023)
2010	<i>Webroot, Inc. and Open Text Inc., v. AO Kaspersky Lab. et al.</i> , Case No. 6:22-cv-243-ADA-DTG, Claim Construction Order, Dkt. 236 (W.D. Tex. Mar. 16, 2023)
2011	U.S. Patent Application Publication No. 2002/0194490 (Halperin ’490)
2012	<i>Webroot, Inc. and Open Text Inc., v. Sophos LTD</i> , Case No. 6:22-cv-240-ADA-DTG, Scheduling Order, Dkt. 54 (W.D. Tex. Aug. 8, 2022)

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Exhibit	Description
2013	<i>Webroot, Inc. and Open Text Inc., v. Forcepoint LLC</i> , Case No. 6:22-cv-00342-ADA-DTG, Defendant's Preliminary Invalidity Contentions (W.D. Tex., Sept. 13, 2022) (excerpted)
2014	<i>Webroot, Inc. and Open Text Inc., v. Sophos Ltd.</i> , Case No. 6:22-cv-00240-ADA-DTG, Defendant Sophos Ltd.'s Preliminary Invalidity Contentions (W.D. Tex., Sept. 13, 2022) (excerpted)
2015	<i>Webroot, Inc. and Open Text Inc., v. Trend Micro, Inc.</i> , Case No. 6:22-cv-00239-ADA-DTG, Defendant's Preliminary Invalidity Contentions (W.D. Tex., Sept. 13, 2022) (excerpted)
2016	<i>Webroot, Inc. and Open Text Inc., v. AO Kaspersky Lab. et al.</i> , Case No. 6:22-cv-243-ADA-DTG, Defendant's Preliminary Invalidity Contentions Appendix A (W.D. Tex., Sept. 14, 2022)
2017	<i>Webroot, Inc. and Open Text Inc., v. CrowdStrike, Inc. and CrowdStrike Holdings, Inc.</i> , Case No. 6:22-cv-00241-ADA, Defendant's Preliminary Invalidity Contentions (W.D. Tex., Sept. 13, 2022) (excerpted)
2018	U.S. Patent 8,726,389 Certified File History
2019	July 13, 2022 Email from Jennifer Inghram of King & Spalding
2020	<i>Webroot, Inc. and Open Text Inc., v. AO Kaspersky Lab. et al.</i> , Case No. 6:22-cv-243-ADA-DTG, Joint Defendants' Opening Claim Construction Brief, Dkt. 86 (W.D. Tex., Oct. 28, 2022)

OpenText Inc. ("Patent Owner") submits this Preliminary Response to the Petition of Sophos Ltd. and Sophos Inc. (collectively, "Petitioner") seeking *inter partes* review ("IPR") of U.S. Patent No. 8,726,389 ("the '389 patent").

I. INTRODUCTION

The Board should decline to institute IPR of the '389 patent because the petition duplicates the parties' district court litigation efforts, is cumulative of evidence the Office already considered during the examination of the '389 patent, and is otherwise a weak petition in which all grounds rely on a fundamentally dissimilar primary prior art reference that does not disclose multiple limitations.

First, the Board should deny institution under *Fintiv* because institution would undermine the congressional purpose of IPRs to "limit unnecessary and counterproductive litigation costs." H.R. Rep. No. 112–98, pt. 1, at 40 (2011), 2011 U.S.C.C.A.N. 67, 69. The validity of the '389 patent is currently being litigated in *five* consolidated district court cases in the Western District of Texas, which will proceed to trial a month ***before*** the final written decision on this petition is due. *See Webroot v. AO Kaspersky Lab*, No. 6:22-cv-00243-ADA-DTG (WDTX) (lead case) ("Kaspersky"); *Webroot v. Trend Micro Inc.*, No. 6:22-cv-00239-ADA-DTG (WDTX); *Webroot v. Sophos Ltd.*, No. 6:22-cv-00240-ADA-DTG (WDTX);

Webroot v. Crowdstrike Inc., No. 6:22-cv-00241-ADA-DTG (WDTX); *Webroot v. Forcepoint LLC*, No. 6:22-cv-00342-ADA-DTG (WDTX).

The five cases will not be stayed in response to institution because they involve 39 *patents* and four additional defendants/counterclaimants, and they will litigate the validity of the '389 patent in the district court based on the same references raised in this petition. The district court previously issued a claim construction order on March 16, 2023, and by the time of the Board's institution decision (in September 2023), the parties will have invested significant resources in over five months of fact discovery. Consequently, the only possible outcome of institution would be needlessly increasing litigation costs by forcing the parties to litigate validity before ***both*** the Board and the district court. The Board should decline to institute on this basis alone.

Second, the Board should deny institution under 35 U.S.C. § 325(d) because Petitioner presents the same art previously considered by the Office during prosecution of the '389 patent. All three of the grounds raised in the petition rely on U.S. Patent Application Publication No. 2004/0111632 to Halperin ("Halperin") as the only reference allegedly disclosing the independent claims. However, during prosecution of the '389 patent, the examiner considered U.S. Patent Application Publication No. 2002/0194490, also to Halperin ("Halperin '490"), the specification

of which contains the same relevant disclosure as the Halperin reference upon which Petitioner relies. Moreover, the examiner considered a European Search Report that identifies Halperin '490 as particularly relevant. Notably, this European Search Report is part of the certified file history provided by the U.S. Patent and Trademark Office, which Patent Owner produced to Petitioner in the related district court proceeding on July 13, 2022, almost eight months before the petition was filed. ***But Petitioner did not include the European Search Report in the copy of the file history that it submitted with the petition.*** In any event, Petitioner relies on the same prior art disclosure over which the Office allowed the '389 patent.

Third, the Board should deny institution because the petition fails to “show[] that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” 35 U.S.C. § 314(a). The '389 patent claims a method and apparatus that (i) receives data about an object from at least two remote computers, (ii) correlates that data and compares it to other objects to identify a relationship between the correlated data and the other objects, and (iii) classifies the object as malware on the basis of that comparison. However, Halperin does not disclose an *object-specific analysis*. Rather, the approach in Halperin is to detect when *collective computer behavior* on a network suggests the presence of a virus and take containment actions to prevent further spread of a virus. Halperin fails

to disclose multiple claim limitations, including at least receipt of data including an identity of an object initiating an event, receipt and correlation of data about the same object from two computers, and classification of the object as malware based on a comparison.

On top of these deficiencies, Petitioner fails to even address a limitation recited in all claims, *i.e.*, identifying a relationship between the correlated data and other objects or entities, making it impossible for the petition to succeed. Accordingly, the petition must be denied.

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

In view of the parallel litigations, in which a district court will adjudicate the same grounds raised in this petition, and on a faster timeline than the Board, the Board should exercise its discretionary denial authority under 35 U.S.C. § 314(a).

“Congress designed the America Invents Act (AIA) post-grant proceedings to ... limit unnecessary and counterproductive litigation costs.” Director’s Memo, *Interim Procedure for Discretionary Denials in AIA Post-Grant Proceedings with Parallel District Court Litigation* (“Guidance”) at 1 (June 21, 2022). Consequently, Director Vidal has instructed the Board not to institute IPR trials that, in view of parallel litigation, would “increase, rather than limit, litigation costs.” *Id.*

Institution of an IPR would force the same parties to litigate the same issues to the Board and district court, only to have the district court resolve these issues before the Board's final written decision. Institution would increase costs, create "potential conflict between the...(PTAB) and district court proceedings," and generally increase "the potential for inefficiency and gamesmanship." Guidance 1. This is precisely the situation Director Vidal told the Board to avoid. *See id.*; *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 at 6 (PTAB Jun. 1, 2021).

Consistent with Director Vidal's guidance, every one of the *Fintiv* factors weighs for discretionary denial:

(1) The likelihood of a stay of the co-pending district court litigation is effectively nil because Petitioner has petitioned for review of only seven of the thirteen patents asserted against it and because the '389 patent is currently asserted against four other defendants in a now-consolidated case, where the claims have already been construed and discovery is well underway.

(2) Trial in the district court is expected one month *before* a final written decision.

(3) The parties and district court have already invested heavily in carrying the parallel litigation past claim construction (which issued six months before the anticipated institution decision) and are well into discovery.

(4) The issues raised in the petition are the same as those the district court has before it, and Petitioner's narrow stipulation will not change that because the stipulation does not apply to Petitioner's co-defendants, who have raised the same prior art before the district court.

(5) Petitioner will get its chance to make its arguments before the district court because Petitioner is a defendant in the parallel litigation.

(6) And, as shown below, the grounds presented in the petition are weak. Thus, every *Fintiv* factor weighs for discretionary denial.

The goals of the AIA and the general welfare of the patent system would be best advanced by denying institution and not creating a parallel proceeding that will lag behind the district court's resolution of the '389 patent's validity.

A. Factor 1: The district court has not granted and will not grant a stay

Fintiv factor 1 weighs strongly for discretionary denial because no stay has been requested, and the circumstances and timing of the district court case demonstrate that a stay is out of the question. The first *Fintiv* factor asks "whether the court granted a stay or evidence exists that one may be granted if a proceeding is instituted." *Fintiv*, IPR2020-00019, Paper 11 at 6. Here, the undisputed answer to both questions is **no**. To the contrary, overwhelming evidence indicates that a stay will not be granted.

First, a stay is unlikely because it would not simplify the issues before the court. The district court's record demonstrates that, when determining a stay, it considers issue simplification "the most important factor."¹ But here, no simplification is possible because the validity of the '389 patent is just one of many issues being litigated in a consolidated action involving *thirty-nine* patents and *five* defendants. The case against Petitioner alone involves seventeen patents—thirteen asserted by Patent Owner and four by Petitioner.

¹ See, e.g., EX-2004, *Sonrai Memory Ltd. v. Kingston Tech. Co., Inc.*, No. 6:21-cv-1284-ADA, slip op. at *4-5 (W.D. Tex. Oct. 18, 2022) (denying a stay following IPR institution because issue simplification was the "most important factor" and the Court had already held a *Markman* hearing and "expended significant resources"); EX-2005, *mCom IP, LLC v. Cisco Sys., Inc.*, No. 6:22-00261-ADA, slip op. at *5 (W.D. Tex. Oct. 20, 2022) (finding "simplification is not likely" where the IPR did not challenge all of the claims asserted in the district court, since the other claims would still require a trial); EX-2006, *Intellectual Ventures I LLC v. Hewlett Packard Enterprise Co.*, No. 6:21-cv-00596-ADA, slip op. at * 7 (W.D. Tex. Dec. 22, 2022) (denying a stay following IPR institution, as even IPR estoppel would not simplify the invalidity case, given the defendants' reliance on prior art systems).

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The table below identifies the patents asserted by Patent Owner against each WDTX defendant and the related petitions for review:

Table 1. Patent Owner's Asserted Patents

Patent	Kaspersky	CrowdStrike	Forcepoint	Sophos	Trend Micro
8,726,389	Asserted; no IPR	IPR2023- 00556	Asserted; no IPR	IPR2023- 00633	Asserted; no IPR
8,418,250	Asserted; no IPR	IPR2023- 00289	<i>N/A</i>	IPR2023- 0699	IPR2023- 00289
10,599,844	Asserted; no IPR	Asserted; no IPR	Asserted; no IPR	IPR2023- 00528	IPR2023- 00662
9,413,721	<i>N/A</i>	<i>N/A</i>	Asserted; no IPR	IPR2023- 00491	<i>N/A</i>
9,578,045	Asserted; no IPR	IPR2023- 00124	<i>N/A</i>	Asserted; no IPR	IPR2023- 00677
10,257,224	IPR2023- 01011	IPR2023- 00126	<i>N/A</i>	Asserted; no IPR	IPR2023- 00657
10,284,591	IPR2023- 00895	IPR2022- 01522	<i>N/A</i>	Asserted; no IPR	IPR2023- 00692
8,856,505	Asserted; no IPR	Asserted; no IPR	<i>N/A</i>	Asserted; no IPR	Asserted; no IPR
8,181,244	<i>N/A</i>	Asserted; no IPR	<i>N/A</i>	Asserted; no IPR	Asserted; no IPR
8,201,243	Asserted; no IPR	Asserted; no IPR	Asserted; no IPR	IPR2023- 00731	Asserted; no IPR
8,719,932	Asserted; no IPR	Asserted; no IPR	Asserted; no IPR	IPR2023- 00732	Asserted; no IPR
11,409,869	Asserted; no IPR	Asserted; no IPR	Asserted; no IPR	PGR2023- 00031	Asserted; no IPR

Patent	Kaspersky	CrowdStrike	Forcepoint	Sophos	Trend Micro
8,763,123	N/A	Asserted; no IPR	N/A	Asserted; no IPR	N/A
8,438,386	N/A	N/A	IPR2023- 00784	N/A	N/A
10,025,928	N/A	N/A	IPR2023- 00786	N/A	N/A

Petitioner concedes that “this multi-defendant consolidated case is exceptionally complicated” and acknowledges the district court’s recognition that “this case is ‘about as complicated as you’re going to get with patent cases.’” (Petition 70.) The complexity of the parallel litigation—which involves numerous claims and issues unrelated to the validity of the ’389 patent—means that the district court will not stay the consolidated proceedings in response to institution.

Second, the district court has been clear in public comments that it will not order a stay in cases where, as here, the district court can resolve the case as quickly as the Board can. (EX-2007 3.) Indeed, as commentators have observed, “Judge Albright almost never stays proceedings to let the PTAB make its decision first.” (*Id.* 2.)

These comments apply squarely to the situation here. The median time-to-trial in WDTX is 28.2 months, meaning that trial would be expected in this case in mid-July 2024, long before a final written decision (expected September 16, 2024). That

Judge Albright has made public comments indicating that his practice is to deny a stay in precisely these circumstances confirms that he would not stay this case in response to institution of this petition.

Petitioner argues that Factor 1 can only be neutral because the Board will not attempt to predict how district courts will proceed. (Petition 67.) But that is false: even where no stay has been requested, the Board has found Factor 1 to favor discretionary denial where (as here) “Petitioner present[ed] no evidence that it has requested a stay [] or that a stay is likely.” *Luxshare Precision Industry v. Amphenol Corp.*, IPR2022-00132, Paper 10, at 9 (PTAB May 3, 2022). And such a decision is particularly appropriate where the circumstances show that “a stay...is unlikely.” *Nintendo Co. v. Gamevice, Inc.*, IPR2020-01197, Paper 13, at 11-12 (PTAB Jan. 12, 2021); *Samsung Elecs. Co. v. Clear Imaging Research LLC*, IPR2020-01399, Paper 13 at 11-12 (PTAB Feb. 3, 2021) (holding Factor 1 may weigh for denial where there is evidence that the district court is unwilling “to avoid duplicative efforts and await the PTAB’s final resolution”); *Motorola Mobility LLC v. Ironworks Patents, LLC*, IPR2021-00421, Paper 11 at 7-8 (PTAB July 22, 2021).

When one considers the full circumstances of this case, the only plausible conclusion regarding a stay is that the district court will not grant one. Because institution will not result in a stay, Factor 1 weighs for discretionary denial.

Samsung, IPR2020-01399, Paper 13 at 11-12; *Motorola*, IPR 2021-00421, Paper 11 at 7-8.

B. Factor 2: A district court trial is expected *before* the projected statutory deadline.

Factor 2, which considers the implications of the district court and IPR schedules, also weighs for denial. “[A] parallel proceeding in an advanced state implicates considerations of efficiency and fairness, which can serve as an independent reason to apply discretion to deny institution.” *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 at 11-12, 17 (PTAB May 13, 2020) (*informative*); Guidance at 1.

Institution here would merely serve to “increase, rather than limit, litigation costs,” because the IPR trial would overlap almost entirely with the parallel district court litigation. WDTX’s median time-to-trial as of March 31, 2023, is 28.2 months (EX-2008 at 37), indicating a trial by mid-July 2024—a date consistent with the currently scheduled trial date of August 19, 2024. (EX-2009 at 6.) Should the Board institute, its final written decision deadline would be September 16, 2024, two months *after* WDTX’s median time-to-trial and one month *after* the scheduled trial date.

In other words, the district court will complete trial well before a final written decision in the IPR. Accordingly, “instituting a trial would be an inefficient use of

Board resources.” See *Fintiv*, IPR2020-00019, Paper 15 at 17 (denying institution where district court trial was scheduled two months before the final decision deadline); *NHK Spring Co., Ltd. v. Intri-Plex Techs., Inc.*, IPR2018-00752, Paper 8 at 20 (PTAB Sept. 12, 2018) (*precedential*) (finding that institution of IPR when the district court trial would resolve validity before the PTAB “would not be consistent with an objective of the AIA...to provide an effective and efficient alternative to district court litigation”); *Samsung Elecs. Co., Ltd. v. California Institute of Tech.*, IPR2023-00131, Paper 10 at 15, 24 (PTAB May 4, 2023) (denying institution where “[r]egardless of whether we consider the scheduled trial date or the trial date expected based on time-to-trial statistics, the trial in the underlying litigation would commence several months before the expected date of our final written decision”); *Eclinical Works, LLC v. Decapolis LLC*, IPR2022-00229, Paper 10 at 9 (PTAB Apr. 13, 2022) (denying institution where WDTX trial was scheduled “roughly one to two months before any final decision would have been due”).

Because no stay will be granted and the district court schedule overlaps almost entirely with the IPR schedule, the Board and district court will proceed in parallel for a year, resulting in precisely the “duplicative,” “unnecessary[,] and counterproductive litigation costs” that *Fintiv* and the AIA were designed to avoid. *Fintiv*, IPR2020-00019, Paper 11 at 10; Guidance at 1; *NXP USA, Inc. v. Impinj*,

Inc., PGR2022-00005, Paper 20 at 7 (PTAB Aug. 25, 2022) (Board should consider “the duplicative efforts that will occur during the [] duration of the inter partes review”).

Petitioner speculates that the district court may ultimately postpone the scheduled trial date (Petition 68-70), but that speculation carries little weight because Patent Owner does not rely only on the scheduled trial date, but on median time-to-trial statistics, as the Director has recommended. Guidance at 8-9. And the *Cizion* decision on which Petitioner heavily relies was decided before Director Vidal issued her guidance in June 2022. (Petition 68 (citing *Cizion, LLC v. Kerr Machine Co.*, PGR2020-00065, Paper 10 at 26 (Dec. 3, 2020)).) Moreover, Petitioner's assertion that delay is likely due to case complexity is unsupported by evidence and cannot, by itself, weigh against exercising discretion. *See NXP*, PGR2022-00005, Paper 20 at 8 (“[S]ome uncertainty as to the trial date...does not change the ultimate decision.”).

Because the district court will not stay the litigation, and the district court will resolve validity before the Board reaches its final written decision, the second *Fintiv* factor also favors discretionary denial.

C. Factor 3: The parties will have invested significant resources in the district court proceeding.

Factor 3, which considers the resources invested in the parallel district court proceeding, weighs strongly for denying institution.

The parties have invested significant resources in the parallel litigation over the last 15 months. For example, the parties long ago exchanged infringement and invalidity contentions (in July 2022 and September 2022 respectively), and the parties will have completed five months of fact discovery by the time the Board reaches an institution decision. Moreover, the district court issued its claim construction order three months ago, on March 16, 2023, (EX-2010), “indicat[ing] that the court and parties have invested sufficient time in the parallel proceeding to favor denial.” *Fintiv*, IPR2020-00019, Paper 11 at 10.

And while *Fintiv* directs consideration of resource investment at the time of institution, the overlapping schedules here counsel the Board to further consider the redundant resources that *will be* wasted should IPR be instituted. *Id.* at 6; *NXP*, PGR2022-00005, Paper 20 at 7; *Cisco Sys., Inc. v. Monarch Networking Solutions LLC*, IPR2020-01227, Paper 11 at 11-12 (PTAB Mar. 4, 2021) (finding that more work completed by the parties and the court suggests that institution would lead to duplicative costs).

Petitioner seeks to compare this case to *Sand Revolution II, LLC v. Continental Intermodal Grp. – Trucking LLC*, but in that case, the Board noted the parallel proceeding's slow start, due to a motion to dismiss and transfer between judges, and the court's minimal two-page *Markman* order. IPR2019-01393, Paper 24 at 10-11 (PTAB June 16, 2020). Even then, the Board still determined that this factor weighed marginally in favor of a discretionary denial. *Id.* at 11.

The investment in this case is colossal and vastly different. The district court's *Markman* order that included the '389 patent was twenty pages, without even considering the Court's substantive analysis or the additional *Markman* orders issued in this case. (EX-2010.) The Court considered and construed six claim terms of the '389 patent, alone. (*Id.*) And as of the date of Patent Owner's preliminary response, the parties have engaged in extensive discovery on the parties' contentions. The Court has held multiple discovery hearings. Furthermore, Patent Owner's experts have already invested an extensive number of hours preparing for their reports by reviewing the patent, prior art, Defendants' invalidity contentions, and source code. *See Regeneron Pharmas. Inc. v. Novartis Pharma AG*, IPR2020-01317, Paper 15 at 17 (PTAB Jan. 15, 2021) (denying institution where the parties had expended considerable resources in claim construction, substantial fact discovery, and preparation for expert reports).

Petitioner's delay in filing its petition further weighs for denial. Petitioner waited almost exactly twelve months after receiving Patent Owner's March 4, 2022 complaint, eight months after receiving Patent Owner's infringement contentions, and six months after serving its invalidity contentions before filing its petition. (EX-2003 at 1; EX-2012 at 1-2.) Petitioner offers no explanation for its delay, which weighs for denial. *Fintiv*, IPR2020-00019, Paper 11 at 11-12; *Ericsson Inc. v. Collision Comms., Inc.*, IPR2022-01233, Paper 12 at 15 (PTAB Jan. 19, 2023) (finding this factor weighs decidedly in favor of discretionary denial" where the parties invested significant resources and "Petitioner waited almost a year" to file its petition).

Petitioner argues that this investment of time and resources by the parties and the district court should be "counterbalance[d]" by Petitioner's investment in the petition. (Petition 70-71.) Petitioner relies on *Apple v. Seven Networks*, but, in *Apple*, the Board merely noted that the petitioner made this argument (because the petitioner had filed 21 petitions) but the Board did not give the argument any weight. IPR2020-00255, Paper 13 at 12-15 (PTAB July 28, 2020). The Board should do the same here because every petitioner spends resources drafting a petition, and Petitioner here does not demonstrate why its efforts should warrant any special consideration. To the contrary, as compared to the significant resources the parties have already

invested in the district court proceeding, Petitioner's investment in the petition is miniscule. *See Regeneron*, IPR2020-01317, Paper 15 at 17 (finding that even where the petition was filed "less than a month after learning of the complaints," the investment by the parties in the parallel proceeding "outweighs the effort expended so far in this proceeding").

D. Factor 4: The issues overlap significantly.

Factor 4—the degree of overlap between the issues in the petition and those before the district court—also weighs strongly for discretionary denial. Regarding this fourth factor, *Fintiv* explains that "concerns of inefficiency and the possibility of conflicting decisions [are] particularly strong" where "the Board [is] presented with substantially identical prior art arguments...at issue in district court." *Fintiv*, IPR2020-00019, Paper 11 at 12. "Accordingly, if the petition includes the same or substantially the same claims, grounds, arguments, and evidence as presented in the parallel proceeding, this fact has favored denial." *Id.*

Here, the petition identifies substantially the same prior art arguments that Petitioner and multiple co-defendants have put before the district court, and no co-defendant has offered any type of stipulation. (EX-2013 11, 16 (asserting Halperin, Kirby, and Mankins); EX-2014 27-28 (asserting Halperin and Kirby); EX-2015 42-

43 (asserting Halperin, Kirby, and Mankins); EX-2016 1 (asserting Halperin); EX-2017 6-7 (asserting Halperin, Kirby, and Mankins).) This fact favors denial.

The Board has held that, at least where the petitioner is the only defendant in the district court, a stipulation not to pursue at the district court “any ground raised or that could have been reasonably raised” in the petition is effective in mitigating concerns of duplicative efforts and conflicting decisions between the district court and the Board. *Sotera Wireless, Inc. v Masimo Corp.*, IPR2020-01019, Paper 12 at 19 (PTAB Dec. 1, 2020) (precedential). However, a limited stipulation not to pursue only the same grounds weighs only “*marginally* in favor of not exercising discretion to deny institution.”² *Sand Revolution II, LLC v. Cont’l Intermodal Group-Trucking LLC*, IPR2019-01393, Paper 24 at 11-12 (PTAB June 16, 2020).

Here, Petitioner has offered only the limited stipulation that it would not use in the district court any prior art reference relied upon in the petition. (Petition 71-72.) Petitioner argues that Factor 4 favors institution because Petitioner’s “stipulation is significantly broader than the stipulation in *Sand Revolution*.” *Id.* But Petitioner’s stipulation (to not use the same prior art references) is certainly not “significantly broader” than a “marginal” *Sand Revolution* stipulation. *Sand*

² All emphases added unless otherwise noted.

Revolution II at 12 n.5. Petitioner's stipulation does no more than a *Sand Revolution* stipulation to "ensure that [the] IPR functions as a true alternative to litigation." *Sand Revolution II* at 12 n.5. To the contrary, the stipulation merely *compounds* litigation costs by allowing Petitioner to pursue separate invalidity theories in parallel at two different tribunals. Thus, at best, the Petitioner's stipulation could not carry any more weight than weighing "only marginally in favor of [institution]." *Id.* at 11-12.

Under the circumstances here, where Petitioner's co-defendants present the same prior art and offer no stipulation, Petitioner's stipulation carries *no weight* because it does not bar the *other defendants* in the parallel litigation from litigating the very same invalidity challenges before the district court. Because Petitioner's stipulation does not "mitigate[] any concerns of duplicative efforts between the district court and the Board," or "of potentially conflicting decisions," Factor 4 weighs in favor of discretionary denial. *Sotera*, IPR2020-01019, Paper 12 at 19; *Google LLC v. EcoFactor, Inc.*, IPR2021-00454, Paper 9 at 12-14 (PTAB July 22, 2021).

E. Factor 5: Both parties are parties in the parallel litigation.

Factor 5—which considers overlap of the parties between the petition and the parallel litigation—favors denial because Petitioner is a defendant in the parallel

litigation and will therefore get the opportunity to litigate the petitioned grounds there.

Because Petitioner is a defendant in the litigation, there are no fairness concerns that a denial would deprive Petitioner of its day in court. *Fintiv*, IPR2020-00019, Paper 11 at 13-14; *Vizio, Inc. v. Maxell, Ltd.*, IPR2022-01459, Paper 7 at 21-22 (PTAB Apr. 11, 2023) (“Because Petitioner is the litigation defendant, factor 5 weighs in favor of discretionary denial”); *Nokia of Am. Corp. v. Godo Kaisha IP Bridge*, IPR2022-00755, Paper 9 at 13 (PTAB Nov. 2, 2022) (holding that Factor 5 weighed for discretionary denial where Petitioner was defendant in parallel proceeding).

That other defendants are *also* litigating the petitioned issues at the district court weighs yet further for discretionary denial. *Fintiv* holds that, “[e]ven when a petitioner is unrelated to a defendant, however, if the issues are the same as, or substantially similar to, those ... about to be litigated, or other circumstances weigh against redoing the work of another tribunal, the Board may, nonetheless, exercise the authority to deny institution.” *Fintiv*, IPR2020-00019, Paper 11 at 14. Because of this consideration, *Fintiv* goes on to require that “[a]n unrelated petitioner ... discuss why addressing the same or substantially the same issues would not be

duplicative of the [other] case even if the petition is brought by a different party.”

Id.

Petitioner fails to offer such an explanation here. That other defendants are currently litigating the same issues raised in the petition raises concerns of duplicative work by adjudicators, and any public policy concerns regarding the validity of patents will be thoroughly addressed by the parallel litigation. Thus, that *other* defendants in the district court proceedings are *also* litigating the petitioned grounds weighs yet further for discretionary denial.

Petitioner argues that Factor 5 weighs in favor of institution because “Patent Owner has a demonstrated history of asserting claims against multiple defendants, and the Board has an opportunity to invalidate some of those claims here.” (Petition 72.) Petitioner cites neither legal precedent establishing such a rule nor logical rationale supporting it. Neither exists. To the contrary, the Board has held that, when multiple parties are litigating the petitioned issues before a district court, this weighs for *denial*, not for institution. *Fintiv*, IPR2020-00019, Paper 11 at 14. Adjudication by the district court is no less effective a remedy than adjudication by the Board. Factor 5 therefore favors denial.

F. Factor 6: The petition does not present “compelling evidence of unpatentability.”

Factor 6—which considers the merits of the petition—also weighs against institution because, as detailed below, the petition fails to show even a “reasonable likelihood” that Petitioner would prevail on any challenged claim. *See* 35 U.S.C. §314(a). Not only does Petitioner fail to show that Halperin discloses or renders obvious several key limitations, but Petitioner fails several times to even address language in these limitations—for example, providing no argument and no evidence that Halperin discloses receiving and correlating information about the *same* computer object or *identifying a relationship* between correlated data and another object or entity. Because Petitioner fails to show a reasonable likelihood of success on the merits, IPR may not be instituted.

Even if the petition did pass the threshold of “reasonable likelihood” (it does not), it certainly would not pass the higher threshold of a “compelling” unpatentability challenge that could preclude discretionary denial. Guidance at 4. “[T]he compelling merits standard is a higher standard than the standard for institution set by statute.” *Commscope Techs. v. Dali Wireless, Inc.*, IPR 2022-01242, Paper 23 at 3 (PTAB Feb. 27, 2023). That higher standard requires determining that the Petitioner’s chances of succeeding on the merits are “highly likely.” *Id.* at 4. But just the opposite is true here. As shown below, Petitioner’s

grounds are exceptionally weak, relying on the same prior art reference considered during prosecution, and failing to disclose multiple limitations due to the reference's fundamental differences from the '389 patent. *See* Section VI, *infra*.

In sum, all six factors weigh for discretionary denial. Accordingly, Patent Owner respectfully requests that the Board exercise its discretion to deny institution.

III. THE '389 PATENT

A. Inadequacy of the Prior Art & The Need for Improved Malware Detection

“Malware” generally refers to an executable computer file or an object that is or contains malicious code, *e.g.*, viruses, trojans, worms, etc. (EX-1001 1:19-22; EX-2001 ¶28.) Much of the prior art anti-malware or anti-virus software focused on scanning and stopping *known* malware. (EX-1001 1:23-2:23.) For example, some prior art anti-virus software analyzed objects for “signatures”—something within the object that was known to be indicative of malware. (EX-1001 1:23-33.) Whenever new malware was detected by the industry, service providers would craft new signatures and release them as updates to their anti-malware programs. (*Id.*) Other prior art systems checked databases of known files to determine whether a file had been known for long enough that it could be deemed safe. (EX-1001 1:48-52.)

These prior art methods for detecting known malware suffered from considerable delays—either while waiting for malware to be detected and a signature

generated or waiting a sufficient amount of time that a program could be deemed safe. (EX-1001 1:35-42, 1:53-59; EX-2001 ¶¶28-29.)

Other anti-malware systems sought to protect from previously unknown malware. For example, many prior art community-based anti-malware systems—*e.g.*, having a central computer and local computers on a network—relied on analysis at the central computer to determine whether a file was known or unknown. (EX-1001 1:65-2:9.) But when a file was unknown, the system had to provide the entire file to the central computer, where a manual or semi-manual detailed analysis of the file would be performed. (EX-1001 2:9-17.) This analysis “can still take days given the human involvement that is typically required.” (*Id.*) Other prior art systems similarly relied on a human administrator to “make a better informed though still ‘manual’ decision as to whether or not the file is safe to run.” (*E.g.*, EX-1001 2:24-33.) Thus, such prior art systems still resulted in considerable delay before a new file could be classified as safe or malware. (EX-1001 2:18-19; EX-2001 ¶¶30-32.)

Accordingly, there was a long-felt need for an improved technique to efficiently determine whether files were safe or malware. (EX-2001 ¶¶30-33.)

B. Innovations of the '389 Patent

Unlike the methods described in the prior art, the '389 Patent describes a rapid determination of whether an object (*e.g.*, a file) should be classified as safe or

malware, without requiring a preliminary detailed analysis of the object. (EX-1001 3:14-24, Cls. 1, 15; EX-2001 ¶¶34-35.) “An object in this sense may be a computer file, part of a file or a sub-program, macro, web page or any other piece of code to be operated by or on the computer, or any other event when executed, emulated, simulated or interpreted.” (EX-1001 8:1-4.)

The '389 patent discloses a method which may be implemented in a distributed network having a “base” computer and multiple “remote” computers:

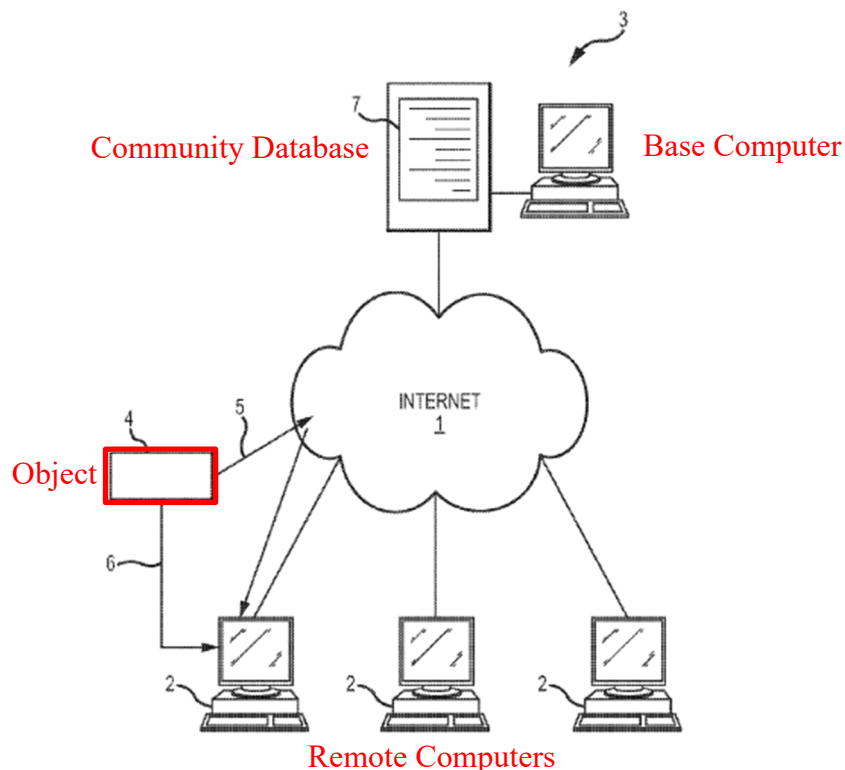


FIG.1

(EX-1001, Fig. 1, 7:59-8:20 (annotated).) The '389 patent discloses a “community database,” in which data about computer objects can be collected from across the

network. (EX-1001 8:21-22, 8:47-50; EX-2001 ¶¶36-38.) Exemplary data includes executable instructions within the object or size, name, or location of the object, etc. (EX-1001 4:58-67; EX-2001 ¶38.) The data stored in the community database provides “an extensive corollary of an object’s creation, configuration, execution, behaviour, identities and relationships to other objects.” (EX-1001 10:37-42.)

The ’389 patent’s collection of this object-specific data allows for a rapid and more efficient determination of whether a particular object is malware. (EX-2001 ¶¶39-40.) At a high level, the ’389 patent discloses a method in which, for example, “a base computer” receives data about a computer object from at least two remote computers, correlates that data, compares the correlated data to other objects or entities to identify a relationship, and classifies the computer object as malware based on its comparison. (EX-1001 3:4-14, cls. 1, 15.)

Specifically, when an unknown object is run at a remote computer, details of the object can be passed to the base computer for storage in the community database and further analysis. (EX-1001 8:21-22, 8:47-50.) When the base computer receives data about a particular object from two or more computers, the base computer may correlate this data about the object to facilitate a comparison with other objects or entities. (EX-1001 10:35-49, cls. 1, 15; EX-2001 ¶41.)

The '389 patent discloses a variety of heuristic processes that can be used to compare the correlated object data to other objects. (EX-1001 10:35-42.) Preferably, the '389 patent compares the correlated data with other objects to identify relationships with those objects. (EX-1001 3:37-38, 11:5-60, 17:24-18:7; EX-2001 ¶¶40-43.) “[A]n object is considered to have a relationship based on the event performed by it upon another object, or upon it by another object”—for example, where one object created another object. (EX-1001 11:7-13.) Thus, “other objects” may include the object-in-question, parent objects (*i.e.*, the object-in-question’s creator), child objects (*i.e.*, objects the object-in-question has created), or other process-related objects. (EX-1001 3:43-47; EX-2001 ¶42.)

The '389 patent provides an example using the notepad.exe program (*i.e.*, object), which is commonly installed on computers running the Windows operating system. (EX-1001 11:30-32.) Because the notepad.exe program has a “limited range of functionality,” certain actions like transmitting data to another computer or program would be unexpected. (*Id.* at 11:32-35; EX-2001 ¶44.) However, it is possible for notepad.exe’s capabilities to be modified by injecting new code into it, *e.g.*, via a dynamic link library injection. (EX-1001 11:35-38.) By identifying relationships between notepad.exe and other objects, “it is possible to deduce that the new behaviours ... can be attributed to the association with another object,” *e.g.*,

that notepad.exe's new behavior was a direct result of its relationship with another object. (*Id.* at 11:40-42; EX-2001 ¶45.) If the new behavior is malicious, or if the program that modified notepad.exe is known to be malicious, then it is possible to classify one or both processes as unsafe based on the comparison of the two. (*Id.* at 11:42-44; EX-2001 ¶45.)

By enabling centralization of object-specific community data and a comparison between objects to identify a relationship, the '389 patent allows for "rapid identification and determination" of "whether or not a particular object should be classed as good or as malware." (EX-1001 3:14-24, 11:55-59; EX-2001 ¶46.) Its methods and system decrease reliance on signature verification and negate the need for manual, time-consuming "deep analysis" of an object. (EX-1001 3:14-24; EX-2001 ¶46.)

C. Claim Construction

Petitioner states that it relies on the plain and ordinary meaning of the claims. (Petition 7³.) Petitioner and its co-defendants raised multiple terms for construction

³Petitioner makes several references to Patent Owner's infringement contentions. (*E.g.*, Petition 25-27, 32, 37.) Patent Owner does not agree with Petitioner's

in the parallel district court litigation. On March 16, 2023, the Court determined that no terms of the '389 patent were indefinite and construed all terms to have their plain and ordinary meaning, while providing the following clarifying remarks:

Claims	Claim Term	Court's Construction
1, 15	"similar objects" / "similar computer objects"	Not indefinite. Plain-and-ordinary meaning. (EX-2010 3.)
14	"a mask for said computer object that defines acceptable behaviour for the computer object"	Plain-and-ordinary meaning Note not for the jury: the plain-and-ordinary meaning of this term is not the inverse of a mask of unacceptable behavior (<i>Id.</i> 4.)
1-14, 26, 30	"events initiated [by] or involving the computer object"	Plain-and-ordinary meaning Note: the plain-and-ordinary meaning of "events" includes but is not limited to "actions or behaviours of an object acting upon another object or some other entity" (<i>Id.</i> 5.)
1	"first remote computer" / "second remote computer"	Plain-and-ordinary meaning (<i>Id.</i> 5.)
1	"correlating...at least a portion of the data about the	Plain-and-ordinary meaning.

characterizations of its infringement contentions. Regardless, Petitioner still fails to show that Halperin discloses several key limitations, as discussed below.

Claims	Claim Term	Court's Construction
	computer object...comparing...the correlated data about the computer object"	The claim language recites that at least a portion of the data, but not all of the data, must be correlated before comparing. (<i>Id.</i> 6-7.)
1, 6, 8, 9, 12, 14, 30	"remote computer"	Plain-and-ordinary meaning (<i>Id.</i> 8.)

Accordingly, Patent Owner and its expert apply the plain and ordinary meaning of the terms consistent with the district court's claim construction order. (EX-2001 ¶47.)

D. Level of Ordinary Skill in the Art

A POSITA at the time of the invention of the '389 patent (which claims priority to an earlier application (GB 0513375.6) filed in Great Britain on June 30, 2005) would have had a Bachelor's degree in an accredited program of Electrical Engineering, Computer Engineering, or Computer Science or in a similar discipline, and have 2-3 years of practical work or research experience in the general fields of electrical engineering, computer science, networking, communications, and device and network security. (EX-2001 ¶¶48-52.) More advanced degrees and/or training in a related discipline can compensate for shorter work experience. (*Id.*)

IV. THE BOARD SHOULD EXERCISE ITS DISCRETION TO DENY INSTITUTION UNDER 35 U.S.C. § 325(d)

The Board has discretion to deny institution when “the same or substantively the same prior art or arguments previously were presented to the Office.” 35 U.S.C. § 325(d). Here, discretionary denial under Section 325(d) is proper because the Office already considered Halperin '490, the specification of which contains the same relevant disclosure as Petitioner's primary Halperin reference. After consideration of these same disclosures, the examiner allowed the '389 patent.

When deciding whether to exercise its Section 325(d) discretion, the Board considers a two-part framework: “(1) whether the same or substantially the same art previously was presented to the Office or whether the same or substantially the same arguments previously were presented to the Office; and (2) if either condition of first part of the framework is satisfied, whether the petitioner has demonstrated that the Office erred in a manner material to the patentability of challenged claims.” *Advanced Bionics LLC v. MED-EL Elektromedizinische Gerate GmbH*, IPR2019-01469, Paper 6 at 8 (PTAB Feb. 13, 2020) (*precedential*).

A. The Same Or Substantially The Same Prior Art And Arguments Were Previously Presented To The Office

In considering the first part of the *Advanced Bionics* framework, the Board may consider the relevant *Becton Dickinson* factors: similarities of asserted art and

art previously considered; cumulative nature of asserted art and art previously considered; and extent of overlap between arguments made during examination and Petitioner's arguments. *Advanced Bionics*, IPR2019-01469, Paper 6 at 9-10 (citing *Becton, Dickinson and Co. v. B. Braun Melsungen AG*, IPR2017-01586, Paper 8, 17–18 (PTAB Dec. 15, 2017) (*informative*)).

First, the prosecution history Petitioner provides at Exhibit 1002 is incomplete, and Petitioner makes several factually incorrect statements regarding the complete prosecution history. Exhibit 1002 omits the European Search Report in which Halperin '490 (EX-2011) was discussed and which was cited and initialed by the examiner in an information disclosure statement ("IDS"). (*Compare generally* EX-1002 *with* EX-2018 222-227.) Even though Petitioner had in its possession a complete certified copy of the prosecution record, which Patent Owner produced to Petitioner on July 13, 2022, in the parallel district court proceeding (EX-2019 (producing all documents in the range: WBRT000001—WBRT008006); EX-2018 (labeled WBRT002798)), Petitioner submitted an incomplete record in support of its petition.

Second, Petitioner mistakenly states that the examiner did not consider Halperin '490 during prosecution. (Petition n.5.) In fact, the examiner specifically initialed a previously submitted IDS, indicating the examiner had, indeed,

considered both Halperin '490 and the European Search Report discussing it before allowing the '389 patent. (EX-2018 259.) “The *precedential* decision in *Advanced Bionics* unambiguously instructs [] ‘previously presented art includes art made of record by the Examiner, and art provided to the Office by an applicant, such as on an [IDS], in the prosecution history of the challenged patent.’” *Nespresso USA, Inc. v. K-Fee Sys. GMHB*, IPR2021-01222, Paper 9 at 11-12 (PTAB Jan. 18, 2022) (citing *Advanced Bionics*, IPR2019-01469, Paper 6 at 7-8) (denying institution where the petitioned prior art—while not considered in a rejection—was contained within an examiner-initialed IDS); *NXP USA, Inc. v. Impinj, Inc.*, IPR2020-00519, Paper 7 at 8 (PTAB Aug. 17, 2020) (denying institution, finding the petitioned prior art “Mandal Thesis and Mandal ‘947” were substantially similar to “Mandal ‘090,” which was previously presented in an examiner-initialed IDS); *Biocon Pharma Ltd. v. Novartis Pharms Corp.*, IPR2020-01263, Paper 12 (PTAB Feb. 16, 2021) (finding examiner had considered prior art included in an examiner-signed IDS).

Halperin and Halperin '490 are identical in relevant disclosure because Halperin '490's specification encompasses Halperin's specification. Both are entitled “System and Method of Virus Containment in Computer Networks” and directed to “detection and containment of malicious computer programs that overcome[] disadvantages of the prior art.” (EX-1006 [0007]; EX-2011 [0007].)

They have identical figures 1-11 and near-identical descriptions of these figures. (EX-1006 [0009]-[0020]; EX-2011 Figs. 1-11, [0059]-[0070].)

The European Search Report considered during the '389 patent prosecution noted “*that document D1 [Halperin '490] appears to be very relevant for the claimed subject-matter*, since it discloses collecting data related to software activity (events) from plurality of clients, and correlating this data on the server in order to detect malicious software.” (EX-2018 225; *see also id.* 226 (listing Halperin '490 as relevant to claims 1-15).) The Search Report cited paragraphs 86-106 of Halperin '490, which describes the method of Figure 6 as implemented in the Figure 5 system. (EX-2018 225-226; EX-2011 [0086]-[0106].) Halperin '490's Figures 5-6, as well as the detailed description of these figures, are identical to Figures 5-6 and their detailed description in Halperin. (*Compare* EX-2011 Figs. 5-6, [0086]-[0106] *with* EX-1006 Figs. 5-6, [0036]-[0056]; EX-2001 ¶63.) Accordingly, the relevant disclosures of Petitioner's Halperin reference are identical to, and cumulative of, the previously considered Halperin '490 reference.

In addition to the same disclosure, Petitioner also relies on the same arguments. In arguing that Halperin discloses the '389 patent claims, Petitioner relies extensively on the detailed descriptions of Figures 5-6—*i.e.*, the same disclosure discussed in the European Search Report and previously considered by the examiner.

(*See, e.g.*, Petition 14-19, 22-26 (annotating and discussing Figure 5; citing EX-1006 [0036]-[0056]).) Just as the European Search Report alleged that Halperin '490 “discloses collecting data ... from [a] plurality of clients,” Petitioner alleges that a server “collect[s] information regarding target behavior detected at two or more of computers 500.” (*Compare* EX-2018 225 with Petition 18 (citing EX-1006 Fig. 5, [0038], [0047])).) Just as the European Search Report alleged that Halperin '490 collects “data related to software activity (events),” Petitioner alleges that Halperin collects “predefined suspicious event[s].” (*Compare* EX-2018 225 with Petition 19-20 (citing EX-1006 [0038]-[0046])).) And just as the European Search Report alleged that Halperin '490 “correlate[es] data on the server in order to detect malicious software,” Petitioner alleges that Halperin's server “may then correlate the presence of target behavior...in order to determine whether the correlated target behavior corresponds to a predefined suspicious behavior pattern.” (*Compare* EX-2018 225 with Petition 23-24 (citing EX-1006 [0037], [0047])).) These arguments were previously considered by the examiner and rejected.

Petitioner relies solely on Halperin for its argument that these limitations were known in the prior art; accordingly, Petitioner's arguments overlap completely with those the examiner previously considered and rejected. *See NXP*, IPR2020-00519, Paper 7 at 8.

B. Petitioner Does Not Show the Examiner Erred

“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 *inter partes* review.” *Advanced Bionics*, IPR2019-01469, Paper 6 at 8-9. “[I]t is Petitioner’s burden to show error under Part Two of the *Advanced Bionics* framework.” *BMW of N. Am., LLC v. Stragent, LLC*, IPR2021-00418, Paper 19 at 6-7 (PTAB Mar. 21, 2022).

Regarding whether the examiner erred, Petitioner merely asserts that “there are no pending proceedings before the PTAB concerning the ’389 Patent, so the second prong is not met either.” (Petition 75 (citing *Oticon Medical AB v. Cochlear Ltd.*, IPR2019-00975, Paper 15 at 20 (PTAB Oct. 16, 2019) (*precedential*).) Petitioner does not explain the relevance of this statement to whether the examiner erred. In *Oticon*, prior to the *Advanced Bionics* two-part framework, the Board determined that because “Choi” was not considered during prosecution and not cumulative, the examiner had erred. *Id.* at 19 (“It seems that the examiner was simply not aware of Choi’s teaching in this regard.”). However, *Advanced Bionics* held that “[i]f reasonable minds disagree regarding the purported treatment of the art or arguments, it cannot be said that the Office erred in a manner material to patentability.” IPR2019-01469, Paper 6 at 9.

Furthermore, *Oticon's* facts starkly contrast with this case, where the Office *did* consider the same prior art and arguments and where Petitioner identifies no basis for material error. *Advanced Bionics*, IPR2019-01469, Paper 6 at 8 (“If the ‘same or substantially the same prior art or arguments previously were presented to the Office,’ then the Board’s decisions generally have required a showing that the Office erred in evaluating the art or arguments.”); *Nespresso USA, Inc. v. K-Fee Sys. GMHB*, IPR2021-01222, Paper 9 at 27 (PTAB Jan. 18, 2022) (“Petitioner does not meaningfully assess the record of examination or explain sufficiently how or why *Becton, Dickinson* factor (c), (e), or (f) supports its positions.”).

The examiner made no error in issuing the ’389 patent over the disclosure contained in Halperin ’490 (which encompasses the disclosure of Halperin) because these references are fundamentally different from the ’389 patent and fail to disclose or render obvious multiple claim limitations. *See* Section VI(A), *infra*. Whereas the ’389 patent claims an object-centric method for determining whether an object is safe or malware, Halperin makes no determination as to whether a particular object is malware and instead seeks merely to detect where computers are collectively misbehaving and contain the spread of a potential virus. *Compare* Section III(B), *supra* with Section V(A), *infra*.

Accordingly, the *Advanced Bionics* framework supports discretionary denial under Section 325(d). *Advanced Bionics*, IPR2019-01469, Paper 6 at 9; *Nespresso USA, Inc. v. K-Fee Sys. GMHB*, IPR2021-01222, Paper 9 at 27 (PTAB Jan. 18, 2022).

V. OVERVIEW OF THE RELEVANT PRIOR ART

A. Overview of Halperin

Halperin is directed to detecting patterns of collective computer behavior on a network that suggest the presence of viral activity and taking containment actions to halt further spread. (EX-1006 Abstract, [0036-0057].) Unlike the '389 patent, Halperin does not disclose a determination of whether any particular object is malware or whether an object should be classified as malware. (*See generally* EX-1006; EX-2001 ¶¶53-56.)

Halperin observed that some prior art antivirus software identified virus behavior by characterizing a program's legitimate behavior and identifying any deviations from such behavior. (EX-1006 [0006].) Halperin criticized this type of object-specific technique as often resulting in false alarms due to the fact that computer user behavior tends to vary over time and between users. (EX-1006 [0006]; EX-2001 ¶54.) Halperin found that due to this technique's shortcomings,

users frequently either disabled this type of antivirus software entirely or set its sensitivity so low that it failed to find existing viruses. (*Id.*)

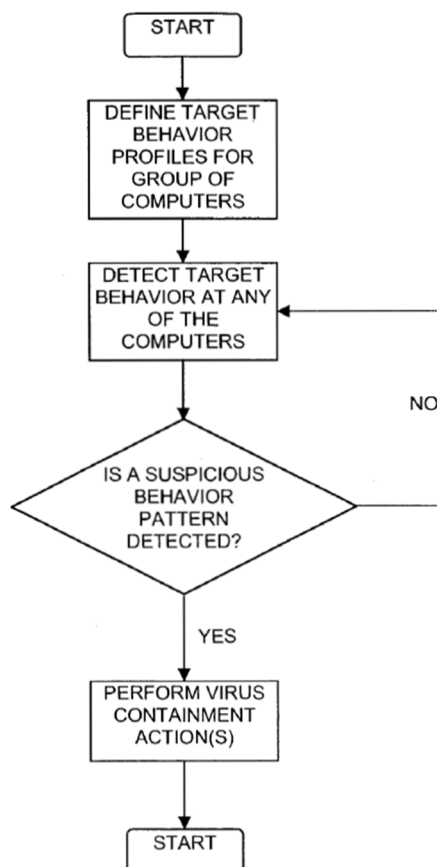
Halperin further recognized that “[i]n most cases, viruses are spread when computer users send infected files to other computer users,” for example, via e-mail, data storage media (e.g., disk or CD), or by sharing infected files from one computer to another. (EX-1006 [0003].) Some viruses were even capable of spreading on their own “with little or no intervention on the part of the computer user.” (EX-1006 [0004].) For example:

A virus that spreads via e-mail messages will typically access an e-mail program's address book or sent/received mail folders and automatically send itself to one or more of these addresses. Alternatively, the virus may attach itself to otherwise innocuous e-mail messages that are sent by a computer user to unsuspecting recipients.

(EX-1006 [0004].)

Thus, Halperin sought to provide a network-level detection and containment method, while overcoming the “false alarm” problem it perceived in the prior art. (EX-1006 [0037]; EX-2001 ¶56.) Rather than monitor or analyze a particular object—like the '389 patent—Halperin's proposed solution detects suspicious patterns of collective computer behavior across a network. (EX-1006 Abstract, [0038]-[0057]; EX-2001 ¶56.) Halperin explains that it is easier to attribute

abnormal activity to the presence of a virus if that activity is observed on *several computers* in a network, rather than just one. (EX-1006 [0038]-[0057]; EX-2001 ¶56 (providing a real-world example).) Halperin determines whether the collective behavior of computers on the network indicates the presence of a potential virus in the network and takes one or more of what Halperin calls “virus containment” actions. (EX-1006 Abstract, [0023]-[0030]; EX-2001 ¶57.) Figure 6 illustrates this overall process:



(EX-1006, Fig. 6.)

Halperin starts by defining one or more “target behavior profiles” for computers on a network—*i.e.*, profiles which define *computer* activity. (EX-1006 [0038] (“Target behavior may be any and all computer activity”), Fig. 6; EX-2001 ¶58.) Examples of target behavior profiles include, among others: “[s]ending messages to more than a predefined number of users during a predefined period of time;...[m]odifying operating system file such as the Microsoft Windows registry; [and] [d]eleting more than a predefined number of files on the computer’s hard disk during a predefined period of time....” (EX-1006 [0039]-[0046].) That is, whereas the ’389 patent looks at information about a particular *object*—*e.g.*, an individual computer program—from multiple computers on a network, Halperin looks for multiple computers on a network exhibiting the same *computer behavior*. (EX-1006 [0037]-[0038]; EX-2001 ¶58.)

Halperin then employs a server on the network to correlate the presence of target computer behavior on multiple computers, *e.g.*, by “identifying the same *activity* in different computers at about the same time.” (EX-1006 [0047].) Halperin then teaches determining whether this collective computer behavior corresponds to a “predefined suspicious behavior pattern,” which would indicate that a virus may have infected the network. (EX-1006 [0047]; EX-2001 ¶¶59-60.)

The exemplary behavior patterns Halperin discloses all relate to a “certain percentage of the computers in the network” all doing the same thing, most often within a relatively short amount of time. (EX-1006 [0048]-[0056]; EX-2001 ¶59.) For example, Halperin states that when a “certain percentage of computers in the network send[] more than 10 messages per minute in the last 5 minutes,” a virus may be present on the network. (EX-1006 [0048].) That is, whereas the ’389 patent relies on data that is specific to a particular computer object to determine whether that object is malware (Section IV(B), *supra*), Halperin relies on data that is not particular to any object, because it seeks to determine whether a certain percentage of computers on the network are behaving unexpectedly. (EX-2001 ¶61.)

Halperin teaches that if the server detects a suspicious behavior pattern, it may initiate “virus containment actions.” (EX-1006 [0057], [0023]-[0030].) Because the system proffers no means of identifying a particular object (*e.g.*, piece of software) as the malware culprit or determining whether an object is or is not malware, Halperin’s proposed solutions amount to either telling a human that there might be a problem (*id.* [0025]–[0027]) or halting the flow of information across the network (*id.* at [0024], [0028]–[0030]; *see also* EX-2001 ¶60). Halperin does not teach removing the offending software. (*See* EX-1001 [0024]-[0030]; EX-2001 ¶61.)

Thus, whereas the '389 patent examines information about a particular *object* from multiple computers on a network to determine whether the *object* should be classified as malware, Halperin looks for the same *behavior or activity* by multiple computers on a network to determine whether the *network* shows signs of malware. (EX-1006 [0037]-[0038]; EX-2001 ¶62.)

VI. THE CHALLENGED CLAIMS ARE PATENTABLE

“In an *inter partes* review, the burden of persuasion is on the petitioner.... Failure to prove the matter as required by the applicable standard means that the party with the burden of persuasion loses on that point—thus, if the fact trier of the issue is left uncertain, the party with the burden loses.” *Dynamic Drinkware, LLC v. Nat'l Graphics, Inc.*, 800 F.3d 1375, 1378-79 (Fed. Cir. 2015); *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d 1356, 1363 (Fed. Cir. 2016) (noting petitioners have the “burden from the onset to show with particularity why the patent it challenges is unpatentable”). Accordingly, a petition must include “a detailed explanation of the significance of the evidence.” 37 C.F.R. § 42.22(a)(2); *see also* 35 U.S.C. § 312(a)(3); *Lumenis Be Ltd. v. BTL Healthcare Techs. A.S.*, IPR2021-01280, Paper 8 at 22 (PTAB Mar. 9, 2022) (finding petitioner had not met its burden and declining to institute because petitioner's argument lacked explanation and the Board was unwilling to speculate).

A. Petitioner Fails To Establish That Halperin Renders Obvious Every Limitation of The Challenged Claims

Petitioner does not demonstrate a reasonable likelihood of success in proving any challenged claim unpatentable. All of Petitioner's grounds rely on Halperin, alone, as disclosing or rendering obvious independent claims 1, 15, and 29 of the '389 patent:

Ground 1	Section 103(a)	Obvious over Halperin	Claims 1-6, 8-13, 15-20, 22-27, 29, 30
Ground 2	Section 103(a)	Obvious over Halperin in view of Kirby	Claims 3, 5, 7, 9-13, 17, 19, 21, 23-27
Ground 3	Section 103(a)	Obvious over Halperin in view of Kirby and Mankins	Claims 14 and 28

The '389 patent and Halperin present fundamentally different methods because each sought to solve a distinct problem. The '389 patent is directed to an efficient, object-centric determination of whether a particular object is malware. (Section III(B), *supra*; EX-2001 §IV(A), ¶35.) Halperin is directed to a method for detecting patterns collective behavior of multiple computers and containing a possible virus outbreak within a network. (Section V(A), *supra*; EX-2001 §V(A), ¶53.) Because Halperin's method is not directed to an object-specific analysis,

Halperin fails to disclose multiple limitations discussed below—particularly, those relating to object-specific data or the object itself. (EX-2001 ¶¶67.)

Because Petitioner fails to establish that Halperin renders obvious all limitations of the independent claims 1, 15, and 29, Petitioner also cannot show that any of its grounds render obvious dependent claims 2-14, 16-28, and 30.⁴

1. Petitioner fails to show that Halperin discloses or renders obvious “*information including at least an identity of an object initiating the event*”

Petitioner fails to show that Halperin discloses or renders obvious “*receiving data about a computer object...including at least an identity of an object initiating the event.*” Petitioner relies on the same analysis of Halperin to support limitations [1B], [15B], and [29] in all Grounds 1-3 of its petition. (Petition 19-21, 27, 41.)

Claim Limitation	Claim Language
[1B], [15B], [29]	“...wherein said data includes information about events initiated or involving the computer object when the computer

⁴ Accordingly, there is no need for Patent Owner to address Petitioner’s Kirby or Mankins references in this preliminary response. Patent Owner reserves the right to raise additional arguments based on these references and a lack of motivation to combine these references with Halperin.

Claim Limitation	Claim Language
	<i>object is created, configured or runs on the first remote computer, said information including at least an identity of an object initiating the event, the event type, and an identity of an object or other entity on which the event is being performed”</i>

To understand the full context of this limitation, limitations [1A] and [1B] (and [15A] and [15B]) must be read together. (EX-2001 ¶¶69.) The '389 patent claims receiving data about a computer object at a base computer, where that data includes information about events initiated by or involving the computer object. (EX-1001 cls. 1, 15.) This information includes at least three things: an identity of an object initiating the event, the event type, and an identity of an object or other entity on which the event is being performed. (EX-1001 cls. 1, 15.) Petitioner's argument that Halperin's server receives information that includes “*an identity of an object initiating the event*” fails for each of the four reasons discussed below.

a) Petitioner fails to show that a computer is “*an object initiating the event.*”

Petitioner first suggests that because Halperin logs a sensor's detection of behavior, including the computer on which the behavior took place, Halperin discloses “*an identity of an object initiating the event.*” (See Petition 20-21.)

Identifying a *computer* (as in Halperin) is not the same as identifying an *object* initiating the event (as required by the '389 patent claims).

The '389 patent explains that an object “may be a computer file, part of a file or a sub-program, macro, web page or any other piece of code *to be operated by or on the computer*, or any other event whether executed, emulated, simulated or interpreted.” (EX-1001 8:1-4.) Petitioner agreed with this definition in its district court claim construction briefing, asserting that an object “refers to a particular file, program, etc.” (EX-2020 3.) As a computer cannot “be operated by or on [a] computer,” a POSITA would understand that the plain and ordinary meaning of “*object*” excludes the computer itself. (EX-2001 ¶¶76-77.)

Halperin's disclosure of potentially logging a *computer* on which an event took place does not disclose logging information that includes “*an identity of an object initiating the event.*” (EX-1006 [0086], [0090]; EX-2001 ¶¶71-78.) This distinction is unsurprising given that Halperin's objective is monitoring computer-level behavior on a network to determine whether a certain percentage of computers are behaving abnormally. (EX-1006 [0047]-[0056]; EX-2001 ¶78.) Accordingly, Petitioner fails to show that Halperin's logging of a computer discloses this limitation.

**b) Petitioner fails to show that Halperin's checksum is
“an identity of an object initiating the event” and that it
is part of the received data.**

Petitioner alternatively argues that Halperin discloses generating a “checksum” that allegedly corresponds to receiving “*an identity of an object initiating the event.*” (Petition 21.) Petitioner's argument fails for two reasons.

As discussed briefly above, limitations [1A] and [1B] must be read together to understand that the '389 patent requires: (a) receiving object data; (b) wherein that data includes information about events initiated by or involving the object; and (c) wherein that information includes—among other things—an identity of an object initiating the event. (EX-1001 cls. 1, 15; EX-2001 ¶80.)

First, Petitioner fails to address a portion of this limitation which requires not only that the received information includes an identity of any object, but also that it includes an identity of “*an object initiating the event.*” (EX-1001 cls. 1, 15; EX-2001 ¶¶81-82.) Petitioner identifies Halperin's target behavior profiles as allegedly corresponding to events—for example, “[m]odifying operating system files such as the Microsoft Windows registry.” (Petition 19-20.) But Petitioner provides no evidence or explanation that Halperin teaches generating a checksum for an object initiating that behavior. (*See id.*) Accordingly, Petitioner has failed to show that

Halperin discloses receiving information about an event that includes “*an identity of an object initiating the event.*”

Second, Halperin fails to disclose “*receiving*” event information that includes an “*identity of an object*” (Halperin’s checksum, according to Petitioner), because Halperin teaches generating the checksum long after target behavior profiles have been detected and evaluated. (EX-1006 [0073]; EX-2001 ¶83.) Petitioner alleges that Halperin teaches “*receiving*” event information, because Halperin teaches that the server collects behavior information. (Petition 18-19 (citing EX-1006 [0047]).) This collection is one of the preliminary steps in Halperin’s overall method, which detects computer-level behavior profiles on a network, detects suspicious behavior patterns across multiple computers, and initiates containment actions. (EX-1006 [0037]-[0057]; Section V(A), *supra*.) However, Halperin does not disclose generating a checksum until *after* completing its collection, detection, *and* containment steps. (EX-1006 [0072]-[0073]; EX-2001 ¶83.) Halperin does not explain how to identify software as malicious, and states only that “*when malicious software has been identified,*” a checksum may be generated. (EX-1006 [0073]; EX-2001 ¶81.) As a result, it would be impossible for the collection of information about computer behavior—which is done long before the server has even detected viral activity—to

include the checksum (*i.e.*, alleged “*identity of an object*”). (EX-1006 [0038], [0047]; EX-2001 ¶83.)

Accordingly, Halperin does not disclose “*receiving*” information about an event that includes the checksum, *i.e.*, the alleged “*identity of an object initiating the event.*”

c) Petitioner fails to show that Halperin inherently discloses this limitation.

Petitioner alternatively suggests that “a POSITA would understand the identity of the object initiating the event necessarily must be collected to perform the correlation analysis Halperin discloses and ultimately to determine whether the object is malware.” (Petition 21.)

This single sentence is the entirety of Petitioner’s inherency argument, which not only fails to address the other deficiencies addressed above (Section VI(A)(1)(a)-(b), *supra*), but also fails to explain *why* a POSITA would have allegedly understood such information to be necessary to Halperin’s method. Accordingly, Petitioner’s argument cannot succeed. *Roland Corp. v. InMusic Brands, Inc.*, IPR2018-00335, Paper 14 at 17 (PTAB July 2, 2018) (quoting *Rosco, Inc. v. Mirror Lite Co.*, 304 F.3d 1373, 1380 (Fed. Cir. 2002) (declining to institute where petitioner failed to support its inherency argument with adequate explanation); *In re Robertson*, 169 F.3d 743, 745 (Fed. Cir. 1999) (“Inherency...may not be established by probabilities

or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.”).

Furthermore, collecting “*an identity of an object initiating the event*” would not, in fact, be necessary to Halperin’s correlation analysis. (EX-2001 ¶¶86-90.) Halperin states that the server “may [] correlate the presence of target behavior detected at two or more of computers.” (EX-1006 [0047].) But Halperin discloses “*behavior* correlation techniques,” such as “identifying the same *activity* in different computers at about the same time, or by identifying repeating *patterns of data within the memories* of two or more computers.” (EX-1006 [0047].) Neither technique requires the identity of the object(s) (*e.g.*, file, macro, piece of code) initiating the behavior on any particular machine. (EX-2001 ¶¶87-89.)

That the identity of an object initiating the event is unnecessary in Halperin’s method is particularly clear given that the suspicious behavior patterns which Halperin seeks to detect only care if a certain percentage of *computers* are detecting certain behavior profiles. (*See, e.g.*, EX-1006 [0048] (looking for a “certain percentage of the computers in the network sending more than 10 messages per minute in the last 5 minutes”); EX-2001 ¶89.) Regardless of whether particular instances of behavior within those profiles are legitimate or not, Halperin will initiate containment actions where there is a pattern of behavior. (EX-2001 ¶89.) Because

the identity of the object(s) initiating events within a target behavior profile is not necessary to Halperin's correlation technique (or its goal of detecting suspicious behavior patterns), the identity would not necessarily need to be collected as part of the computer's behavior information. (EX-2001 ¶90.)

Petitioner is also mistaken that the identity of the object (or objects) initiating events within a target behavior profile is needed "to determine whether the object is malware." (Petition 21.) Halperin is not directed to determining whether an object is malware, and Petitioner identifies no disclosure of Halperin's server performing such a determination, such that it would necessarily collect the identity of objects initiating events within the target behavior profile. *See* Section V(A), *supra*. Rather, Halperin is directed to detecting target computer behavior, evaluating the collective behavior of computers across the network for suspicious behavior patterns, and initiating virus containment actions. (*Id.*; EX-2001 ¶92.) None of these steps correspond to a determination of whether a particular object is malware, nor do they rely on the identity of objects initiating events within the target behavior profile. (EX-2001 ¶91-92; EX-1006 [0038]-[0057], [0023]-[0030].)

Finally, because Halperin discloses generating a checksum only *after* completing its detecting, evaluating, and containment steps, a POSITA would not understand that Halperin's method necessarily collects a checksum as part of

collecting computer behavior information. (Section VI(A)(1)(b), *supra*; EX-2001 ¶93.) Accordingly, Petitioner fails to show that Halperin discloses necessarily receiving “*an identity of an object initiating the event.*” *In re Robertson*, 169 F.3d at 745.

d) Petitioner fails to show that Halperin renders this limitation obvious.

Petitioner's final, one-sentence argument that, alternatively, “it would have been obvious to include an identity of an object initiating the event, *e.g.*, the checksum” fails to address the other deficiencies identified above (Section VI(A)(1)(a)-(b), *supra*), and is unsupported and conclusory. (Petition 21-22.) Petitioner does not identify a single reason why including an object identity in the collected computer behavior information would have been obvious. Nor does Petitioner explain why a POSITA would have been motivated to have the server collect this information, when it would serve no purpose in Halperin's method. Such conclusory assertions are inadequate to satisfy Petitioner's burden on institution. *In re Magnum Oil Tools Int'l, Ltd.*, 829 F.3d 1364, 1380 (Fed. Cir. 2016) (a petitioner's burden of proving obviousness cannot be satisfied by employing “mere conclusory statements”).

Moreover, there are good reasons *not* to generate and collect a checksum for every object that initiates an event covered by a target behavior profile. (EX-2001

¶96.) Doing so is not a resource-neutral endeavor; it consumes both computational and transmission resources and becomes more costly as larger numbers of objects must be identified and their identities transmitted. (EX-2001 ¶96.) Halperin discloses a variety of target behavior profiles, including “[s]ending messages to more than a predefined number of users during a predefined period of time,” “[d]eleting more than a predefined number of files on the computer’s hard disk during a predefined period of time,” and “[l]oading a new software application into the computer’s RAM.” (EX-1006 [0038]-[0046].) Halperin does not disclose, nor would a POSITA have been motivated to identify and generate a checksum for all objects that may or may not initiate or be involved in events covered by a behavior profile because doing so would be exceedingly inefficient. (EX-2001 ¶96.)

Nor can Petitioner identify any *benefit* that would accrue to the practitioner of Halperin’s purported invention from this costly expenditure of resources, because the system according to Halperin does not need to know the identities of the event-initiating objects to be able to detect suspicious patterns of computer-level behavior. (EX-2001 ¶96.)

Accordingly, it would not have been obvious to include an identity of an object initiating an event in the computer behavior information, and Halperin does not render obvious receiving information about an event that includes “*an identity*

of an object initiating the event.” (EX-2001 ¶¶94-97.) Petitioner has not established a reasonable likelihood of success in meeting its burden to show unpatentability. *In re Magnum*, 829 F.3d at 1380.

2. Petitioner fails to show that Halperin discloses or renders obvious “*receiving data about the computer object from a second remote computer...including at least an identity of an object initiating the event.*”

Halperin does not disclose at least two different portions of limitation [1C]:

(1) “*receiving data about the computer object from a second remote computer*” and

(2) “*wherein said data includes information about events...said information including at least an identity of an object initiating the event.*” (EX-2001 ¶¶98-100.) Petitioner relies on the same analysis of Halperin to support limitations [1C], [15C], and [29] in all grounds of its petition. (Petition 22-23, 27, 41.)

Claim Limitation	Claim Language
[1C], [29]	“ <i>at the base computer, receiving data about the computer object from a second remote computer on which the computer object or similar computer objects are stored...wherein said data includes...information including at least an identity of an object initiating the event</i> ”

Claim Limitation	Claim Language
[15C]	<i>“the base computer being constructed and arranged to receive data about the computer object from a second remote computer on which the computer object or similar computer objects are stored, wherein said data includes...information including at least an identity of an object initiating the event”</i>

a) **Petitioner fails to show that Halperin discloses
“receiving data about the computer object from a
second remote computer.”**

Halperin does not disclose receiving information about a particular object from a first computer and receiving information about that object from a second computer. (Petition 22-23.)

After receiving data about a computer object from a first remote computer, the '389 patent claims receiving—at the base computer—information about that computer object from a second remote computer.⁵ (EX-1001 cl. 1 (“receiving data about the computer object”); EX-2001 ¶¶102-103.)

⁵ As Patent Owner explained in its district court claim construction briefing, the '389 patent contemplates embodiments in which, for example, the object might have

Petitioner does not identify any evidence that Halperin's server receives information about a particular object from two different remote computers. (Petition 22-23.) Petitioner cites Halperin's disclosure that "each computer ... logs every event of a sensor identifying a suspicious behavior[.]" (EX-1006 [0086], [0090]; Petition 22.) But that disclosure does not require that the logged information be about the object on multiple computers. (EX-2001 ¶¶104-106; *In re Robertson*, 169 F.3d at 745 ("Inherency...may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient.").)

Petitioner once again includes a single-sentence argument that "a POSITA would have known [Halperin's] correlation would require the information describe the '*computer object or similar computer objects.*'" (Petition 23.) As an initial matter, the independent claims require that the information be "*about the computer object.*" (E.g., EX-1001, cl. 1.) The claim allows for this information to come from a second remote computer "*on which the computer object or similar computer*

different creation dates across computers. (EX-1001 3:31-32, 3:57-4:4.) Regardless, Petitioner fails to show that Halperin's server receives information about *any* particular object.

objects are stored,” but the data received must be about the computer object referenced in limitation [1A] about which data was received from the first computer. (*Id.*; EX-2001 ¶¶107-108.)

More importantly, Petitioner's argument, devoid of factual support, amounts to pure conjecture. Petitioner does not cite its expert or any other factual basis that the large variety of target behavior profiles defined at different computers would result in information about the same object. Halperin describes its correlation technique as “identifying *the same activity* in different computers *at about the same time*, or by identifying *repeating patterns of data* within the memories of two or more computers.” (EX-1006 [0047].) And, contrary to Petitioner's argument, a POSITA would have understood that identifying the same activity or repeating patterns of data would **not** require that the activity or data be about the same object. (EX-2001 ¶¶109-112.) For example, identifying the same behavior profiles across computers would merely require the behavior profile, the originating computer, and the time the profile was detected. (*Id.*) This understanding is consistent with Halperin's objective, which is to identify where a percentage of *computers* on the network are behaving abnormally without regard to particular objects. (EX-1006 [0047]-[0056]; EX-2001 ¶110.)

Accordingly, Petitioner fails to show a reasonable likelihood of success in meeting its burden to prove that Halperin discloses “*receiving data about the computer object from a second remote computer.*”

**b) Petitioner fails to show that Halperin receives
“information including at least an identity of an object
initiating the event.”**

For the same reasons discussed in detail above for limitation [1B], Halperin does not disclose “*receiving...from a second remote computer...information including at least an identity of an object initiating the event.*” See Section VI(A)(1), *supra*; Petition 23; EX-2001 ¶¶113-114. Accordingly, Petitioner has not shown a reasonable likelihood of success of meeting its burden to show that claims 1 or 15, or their dependent claims, are unpatentable.

3. Petitioner fails to show that Halperin discloses or renders obvious “correlating...data about the computer object received from the first remote computer to...data about the computer object received from the second remote computer”

Petitioner relies on the same analysis of Halperin to support limitations [1E], [15E], and [29] in all grounds of its petition. (Petition 23-24, 27, 41.)

Because Petitioner has failed to show that the data received from each of the first and second remote computers is “*about the computer object*” (Section VI(A)(2), *supra*), Petitioner also fails to show that Halperin correlates data about the computer

object received from a first computer to data about that object received from a second computer. (*Id.*; EX-2001 ¶¶115-122; EX-1001 cls. 1, 15.)

4. Petitioner fails to show that Halperin discloses or renders obvious “*comparing...the correlated data...to other objects or entities to identify relationships between the correlated data and the other objects or entities*”

Petitioner fails to even address the portion of this limitation that requires “*identify[ing] relationships between the correlated data and the other objects or entities.*” Petitioner relies on the same analysis of Halperin to support limitations [1F], [15F], and [29] in all grounds of its petition. (Petition 24-27, 41.)

Claim Limitation	Claim Language
[1F], [29]	“ <i>comparing, by the base computer, the correlated data about the computer object received from the first and second remote computers to other objects or entities to identify relationships between the correlated data and the other objects or entities</i> ”
[15F]	“ <i>the base computer being constructed and arranged to compare the data about the computer object received from the first and second remote computers to other objects or entities to identify relationships between the correlated data and the other objects or entities</i> ”

The '389 patent claims comparing the correlated data about the computer object “*to other objects or entities to identify relationships between the correlated data and the other objects or entities.*” (E.g., EX-1001, cl. 1.) As discussed above, an exemplary embodiment of the '389 patent analyzes whether the given object was the parent or child of, or was otherwise affected by, another object. (EX-1001 11:7-18; EX-2001 ¶¶125-127.) This analysis is important for the '389 patent's object-centric system because it allows the system to make a more efficient determination of whether an object should be classified as malware. (EX-1001 11:18-44; EX-2001 ¶128.)

Petitioner does not even allege that Halperin discloses “*identify[ing] relationships*” and fails to point to any disclosure of Halperin that satisfies this portion of the limitation. (See Petition 24-26.) Petitioner makes two arguments with respect to this limitation as a whole: (1) that Halperin compares the correlated computer behavior with a predefined suspicious behavior pattern (allegedly “another object or entity”); and (2) that Halperin compares “the data received ... to one or more rules that trigger ‘containment actions.’” (Petition 24-26.) Patent Owner disputes these characterizations—at least because Halperin does not disclose “*correlated data about the computer object*” for the reasons discussed above. See Section VI(A)(3), *supra*. But regardless, Petitioner ends its analysis there and fails

to even address whether such an alleged comparison is performed “*to identify relationships between the correlated data and the other objects or entities.*” (E.g., EX-1001, cls. 1, 15.)

“The petition must specify where each element of the claim is found in the prior art patents or printed publications relied upon.” 37 C.F.R. § 42.104(b)(4). Petitioner fails to do so and therefore cannot meet its burden to show a reasonable likelihood that it will prevail with respect to at least one claim. *See Intelligent BioSystems, Inc. v. Illumina Cambridge Ltd.*, 821 F.3d 1359, 1369 (Fed. Cir. 2016) (“It is of the utmost importance that petitioners in the IPR proceedings adhere to the requirement that the initial petition identify ‘with particularity’ the ‘evidence that supports the grounds for the challenge to each claim.’”).

Petitioner's expert merely states in conclusory fashion (and quoting '389 patent claim language) that such comparison is made “in order to identify relationships between the correlated data and the other objects.” (EX-1004 ¶87; EX-2001 ¶129.) But he does not explain why his conclusion follows from Halperin's teaching or what the purported relationship is; therefore, his testimony is insufficient to fulfill Petitioner's burden for institution. *Xerox Corp. v. Bytemark, Inc.*, IPR2022-00624, Paper 9 at 15 (PTAB Aug. 24, 2022) (*precedential*) (designated Feb. 10, 2023) (finding an expert's declaration that “merely repeats” conclusory assertions

without additional supporting evidence or any technical reasoning is “entitled to little weight,” particularly where the testimony is offered to supply a limitation missing from the prior art); 37 C.F.R. § 42.65(a) (“Expert testimony that does not disclose the underlying facts or data on which the opinion is based is entitled to little or no weight.”).

Indeed, because Halperin's system is concerned with collective computer behavior (and not an object's), a POSITA would understand that defining object-to-object relationships, as Petitioner appears to suggest, would not only require extensive modification of Halperin's system but burn resources to no effect. (EX-2001 ¶130.) That is, because Halperin's system does not know and cannot determine whether any given object is itself safe or malware, identifying a relationship between that object and another object would be wasted effort. (EX-2001 ¶130.) Accordingly, Petitioner fails to meet its burden and cannot succeed in showing that Halperin discloses every limitation of the independent (or their dependent) claims. *Intelligent BioSystems*, 821 F.3d at 1369.

5. Petitioner fails to show that Halperin discloses or renders obvious “*classifying...the computer object as malware on the basis of said comparison*”

That Halperin discloses detection of potential viral *activity* and initiation of an alarm or containment actions does not show that Halperin discloses or renders

obvious classifying a particular object as malware. Petitioner relies on the same analysis of Halperin to support limitations [1G], [15G], and [29] in all grounds of its petition. (Petition 26-27, 41.)

Claim Limitation	Claim Language
[1G], [29]	<i>“classifying, by the base computer, the computer object as malware on the basis of said comparison.”</i>
[15G]	<i>“the base computer being constructed and arranged to classify the computer object as malware on the basis of said comparison”</i>

Petitioner's analysis of Halperin with respect to this limitation is limited—a single three-sentence paragraph with two separate arguments. Both arguments fail.

First, Petitioner merely states in conclusory fashion that Halperin teaches classifying the computer object as malware if the base computer determines that the correlated computer behavior matches a predefined suspicious behavior pattern. (Petition 26.) Petitioner cites no less than six paragraphs from different places in Halperin's specification without any indication as to what in Halperin purportedly corresponds to a classification. Thus, Petitioner fails to meet its burden on institution. *Harmonic*, 815 F.3d at 1363; *Lumenis*, IPR2021-01280, Paper 8 at 22.

The two parenthetical quotes included in the petition do not remedy this deficiency. (Petition 26 (quoting EX-1006 [0087], [0061]).) The first quote, when read within the context of its surrounding paragraph, merely confirms that “identification of malicious code” is referring to the detection of virus-like *activity* before initiating an alarm or containment actions. (EX-1006 [0090]; EX-2001 ¶¶134-137.) Similarly, the second quote again confirms that Halperin is directed to detecting potential viral *activity* (with or without a subsequent check by an operator as to whether this activity was legitimate or potentially virus-related). (EX-1006 [0061]; EX-2001 ¶¶138-141.) Neither discloses a determination of whether a particular object is malware or any classification. (EX-2001 ¶142.)

Moreover, Petitioner's assertion that Halperin discloses classification of a particular object as malware as a result of detecting a suspicious behavior pattern is incorrect; rather, Halperin discloses initiation of virus containment actions. (EX-1006 [0047], [0057]; EX-2001 ¶143.) After collecting target computer behavior, Halperin determines whether the collective network behavior corresponds to a predefined pattern of computer behavior, e.g., whether a certain percentage of the computers in the network are behaving in a certain way. (EX-1006 [0047]-[0056].) That is, Halperin detects potential “virus *activity*”—out-of-the-ordinary actions taken **at the computer or network level**. (EX-1006 [0061], [0048], [0050].) This

determination “indicat[es] that a computer virus may have infected those computers.” (EX-1006 [0047].) “Upon detecting a suspicious behavior pattern, [the] server [] may initiate one or more virus containment actions.” (EX-1006 [0057].) Halperin’s detection of potential viral activity on a network and actions to contain the spread of a potential virus do not disclose an object-specific determination of whether a particular object is malware or any classification of such object. (EX-2001 ¶143.)

A POSITA would understand that Halperin’s front-end omission of object classification is by design, because nothing about Halperin’s back-end containment disclosures contemplates—much less requires—classifying any particular object as malware. (EX-2001 ¶144.) Instead, those containment actions either halt network traffic to or from affected computers or notify a human that malware may have been detected. (*See* EX-1006 [0023]-[0030].) None of Halperin’s exemplary containment actions require a prior classification of a particular object as malware. (*See* EX-1006 [0023]-[0030]; EX-2001 ¶144.)

Second, Petitioner asserts that a POSITA “would further understand” that Halperin’s “virus alarm” or “virus containment actions” occur “because the system has classified the computer object as malware.” (Petition 26-27.) But Petitioner fails to explain or support these conclusory assertions or explain why the initiation of an

alarm or containment action necessarily means that an object was classified as malware. (*See id.*; EX-1004 ¶¶89-90.) Such assertions are inadequate to meet Petitioner's burden on institution. *See e.g., Lumenis Be Ltd. v. BTL Healthcare Techs. A.S.*, IPR2021-01280, Paper 8 at 22 (PTAB Mar. 9, 2022) (declining to institute, because petitioner's argument lacked explanation and the Board was unwilling to speculate); *Roland*, IPR2018-00335, Paper 14 at 17; *In re Robertson*, 169 F.3d at 745.

Moreover, Halperin's initiation of a virus alarm or containment actions does not mean that Halperin's system classifies a particular object as malware. (EX-2001 ¶¶145-147.) Dr. Medvidovic provides an example to illustrate this lack of inherency. (EX-2001 ¶148.) When a patient calls his doctor and says he is experiencing coughing, sneezing, and a runny nose, the doctor may recommend, among other things, that the patient stay home from work or school to avoid passing on the presumed infection to others. (EX-2001 ¶148.) But the fact that the doctor detected symptoms and took containment actions does not mean that he also necessarily diagnosed (or classified) the patient as having *any* virus—much less that the doctor identified the *particular* virus responsible for the patient's symptoms. (EX-2001 ¶148.)

Similarly, here, when Halperin detects malware symptoms, it initiates actions to prevent further spread from potentially infected systems. (EX-2001 ¶149.) But Halperin's disclosure of actions taken to *contain* a possible virus on a network does not inherently disclose or indicate to a POSITA that Halperin has *classified* any particular object as malware—particularly where none of the remedial containment actions Halperin discloses requires knowledge of which particular object might be malware. (See EX-1006 [0048]-[0056]; EX-2001 ¶¶149, 147.)

Dr. Newman's declaration merely repeats the same conclusory assertions contained in the petition and is, therefore, entitled to little weight. *Xerox*, IPR2022-00624, Paper 9 at 15; 37 C.F.R. § 42.65(a). Accordingly, Petitioner does not establish a reasonable likelihood of success in meeting its burden to show that Halperin discloses "*classifying...the computer object as malware.*"

B. Other Limitations or Prior Art Not Addressed

At this preliminary stage, Patent Owner addresses those deficiencies in the prior art which clearly show a lack of reasonable likelihood of the petition's success. Patent Owner's decision not to address certain limitations or secondary prior art references at this preliminary stage in no way reflects Patent Owner's agreement with the petition or lack of dispute as to additional limitations or prior art.

C. There Are Objective Indicia Of Nonobviousness

Patent Owner contends that objective indicia of nonobviousness exist and reserves its right to provide evidence on this point, should the Board institute. (EX-2001 ¶¶154-156.)

VII. CONCLUSION

For the foregoing reasons, the Board should deny institution.

Date: June 16, 2023

Respectfully submitted,

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CERTIFICATION OF WORD COUNT

The undersigned hereby certifies that the portions of the above-captioned **PATENT OWNER PRELIMINARY RESPONSE** specified in 37 C.F.R. § 42.24 have 13,928 words, in compliance with the 14,000 word limit set forth in 37 C.F.R. § 42.24. This word count was prepared using Microsoft 365 Word version 2202.

Date: June 16, 2023

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CERTIFICATE OF SERVICE

The undersigned hereby certifies that the foregoing **PATENT OWNER PRELIMINARY RESPONSE** and all supporting **EXHIBITS 2001-2020** were served by filing the documents through the Patent Trial and Appeal Case Tracking System (P-TACTS), as well as sent via Federal Express on June 16, 2023 and courtesy copies were also served via electronic mail, in their entireties on the following:

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