

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

CROWDSTRIKE, INC.,
Petitioner
v.

GOSECURE, INC.,
Patent Owner

Case Nos. IPR2025-00067
Patent No. 9,106,697

**PETITIONER'S REPLY TO
PATENT OWNER'S PRELIMINARY RESPONSE**

I. The Claims Do Not Mandate the VMM Create a Fingerprint

As discussed in the Petition, Capalik and the '697 Patent share an inventor and include starkly similar disclosures. Petition, 8-11, 21-27. Relevant to the arguments raised in the POPR, Capalik describes the same Virtual Machine (“VM”) and Virtual Machine Monitor (“VMM”) as the '697 Patent using almost verbatim terminology. Petition, 26. Patent Owner (“PO”) does not dispute this and does not identify any meaningful distinctions between the relevant disclosures in Capalik and the '697 Patent. But the POPR nonetheless insists that the plain claim language requires something more than is taught by Capalik. Namely, the POPR argues that “[t]he structure of the claim plainly requires the virtual machine monitor to be involved in creating a fingerprint” and that “fingerprint generation in Capalik occurs entirely *outside* the virtual machine monitor.” POPR, 21-22 (emphasis in original). PO’s entire argument is premised on an implicit narrow construction—that the structure of the claims mandates the virtual machine monitor create a fingerprint. PO’s implicit construction finds no support whatsoever in the patent and contradicts its allegations in parallel district court litigation. Accordingly, it should be rejected.

Claim 1 injects confusion into its meaning and scope by bouncing back and forth between method steps and system structure. At the heart of the instant dispute is a series of five steps that are introduced by the following language “the method comprising, *at the virtual machine monitor*.” The POPR insists this claim language

means that each of the subsequently recited steps must be performed **by or in** the VMM. Petitioner advocates a broader interpretation—consistent with the specification—that the fingerprint is generated by the same decoy system that contains the VMM and that monitors a VM.

Only Petitioner’s interpretation finds any support in the intrinsic record. Indeed, as set forth in the Petition, Capalik and the ’697 Patent describe nearly identical VM and VMM approaches. *See, e.g.*, Petition, 18-27. They use nearly identical language and ascribe the same functions to the same functional blocks. Nowhere in the ’697 Patent is there any teaching or suggestion that a VMM creates a fingerprint/signature indicative of attack activity. Instead, like Capalik, the ’697 Patent teaches a VMM that monitors attacks on a VM and that relies on a separate fingerprint/signature “generation engine.” *Compare* Ex. 1001, Fig. 2 (depicting VMM (Hypervisor) 214 and fingerprint generation engine 130 as separate modules in decoy network device 106), *with* Ex. 1004, Fig. 5 (depicting Hypervisor and signature generation engine as separate modules in decoy computer network). The ’697 Patent teaches that its signature generation engine is separate from the VMM and even teaches that it may be contained in a separate physical machine from the VMM. Ex. 1001, 8:12-19 (“[I]n some embodiments, the fingerprint generation engine 130 and the virtualized decoy OS 112 are part of or stored within the decoy network device 106. In other embodiments, the fingerprint generation engine 130

and the virtualized decoy OS 112 are implemented using separate computer systems. In some embodiments, the fingerprint generation engine 130 includes the database server 128.”); 8:22-40 (explaining that the VMM and fingerprint generation engine may be implemented on “different servers” comprising “decoy network device 106”). Fatal to PO’s position, the ’697 Patent never suggests a signature generation engine contained within the VMM. It is well-established that claims should not be construed in a manner contrary to the specification. *See C.R. Bard, Inc. v. M3 Sys., Inc.*, 157 F.3d 1340, 1360 (Fed. Cir. 1998) (“[T]he claims are construed in accordance with the rest of the specification of which they are a part, and not contrary to it.”). Consistent with this principle, the Board should reject the POPRs request to interpret the Challenged Claims contrary to the specification.

Finally, PO’s implicit narrow construction directly conflicts with the broader interpretation PO has advanced in parallel litigation. In its Complaint, PO asserts that Petitioner’s Accused Products “include ‘hypervisors’ which are also known as virtual machine monitors that are used to supervise virtual machines.” Ex. 1027 (Complaint), ¶93. Where the Complaint addresses “creating . . . a fingerprint,” however, it does not even allege that the hypervisor or any VMM is involved. *Id.*, ¶¶98-99. Instead, PO contends that “the ‘Cloud IOMs’ (i.e., indicators of misconfiguration) generates identifiers (e.g., fingerprints) that can identify the particular activity on the virtual machine.” *Id.*, ¶99.

II. The Record Demonstrates that King was Publicly Available

At institution, a petitioner must establish “a reasonable likelihood that the reference was publicly accessible before the critical date of the challenged patent.” *Hulu, LLC v. Sound View Innovations, LLC*, IPR2018-01039, Paper 29 at 13 (PTAB Dec. 20, 2019) (precedential); *see also Equistar Chems., LP v. Exxonmobil Chem. Patents Inc.*, IPR2017-0153, Paper 14 at 14 (finding evidence of public availability sufficient to institute and quoting *TriVascular, Inc. v. Samuels*, 812 F.3d 1056, 1068 (Fed. Cir. 2016) for the proposition that “there is a significant difference between a petitioner’s burden . . . at institution, and actually proving [its case] at trial”). The existing record demonstrates that King was publicly available before the priority date and that a fully developed record is at least reasonably likely to prove this.

PO initially challenges the timing of Ms. Munford’s analysis, insisting that her review of King’s MARC record in 2024 cannot serve as public accessibility evidence as of the critical date in 2010. POPR, 29-30. PO is incorrect. Courts routinely accept evidence attesting to library “general practice for indexing, cataloging, and shelving theses in estimating the time it would have taken to make the dissertation available to the interested public.” *In re Hall*, 781 F.2d 897, 899 (Fed. Cir. 1986); *see also Unified Patents Inc. v. Sound View Innov., LLC*, IPR2018-00599, Paper 50, 45 (final written decision crediting 2018 analysis of MARC record as evidence of thesis indexing and availability as of 1999).

PO's remaining arguments seek to align the instant record with *Microsoft Corp. v. ThroughPuter, Inc.* in which the Board found a significantly less detailed MARC record of a thesis, allegedly indexed by a Japanese University, insufficient to satisfy the public availability requirement. IPR2023-00852, Paper 18 (PTAB Nov. 9, 2023). PO's reliance on *ThroughPuter* is misplaced for a number of reasons. First, King's MARC record from the University of Michigan Library Catalog contains multiple 035¹ Fields—absent in the MARC records of *ThroughPuter*—demonstrating that King was indexed in major online searchable databases including OCLC, ProQuest, and the University of Michigan Library Catalog. Databases like these are routinely cited by the Board as evidence of public availability. *See AMD, Inc. v. Realtek Semiconductor Corporation*, IPR2023-00788, Paper 12, 25-26 (finding sufficient that thesis was indexed by UC-Berkeley Library Catalog and OCLC); *The Boeing Co. v. Laser Spallation Techs., LLC*, IPR2024-00761, Paper 8, 12-15 (finding sufficient that thesis was indexed with ProQuest). Second, King's MARC record contains a Field 005² entry, indicating that all listed indexing occurred as of August 30, 2007. The Board has relied on Field 005 to establish public

¹ Field 035 represents system control numbers from external databases or cataloging systems. <https://www.loc.gov/marc/bibliographic/bd035.html>

² Field 005 indicates the last modification date of a MARC record. <https://www.loc.gov/marc/bibliographic/bd005.html>.

accessibility. *See Kinaxis Inc. v. Blue Yonder Group, Inc.*, IPR2021-01205, Paper 16, 12-15. No such 005 data was at issue in *ThroughPuter*.

Furthermore, King's MARC record indicates that King was indexed by the University of Michigan Library Catalog as of November 28, 2006 (Field 008) and searchable by author (Field 100) and title (Field 245). Ex. 1009, 22. The Board routinely credits such MARC records as evidence of indexing in a search engine and public availability. *See* IPR2018-00599, Paper 50, 31 (finding public availability on a similar MARC record indexing in Cornell University Library Catalog); *see also In re Hall*, 781 F.2d at 899–900 (“a single cataloged thesis in one university library . . . constitute[s] sufficient accessibility to those interested in the art exercising reasonable diligence”).

Newly introduced here, responsive to the POPR, Dr. Samuel T. King's declaration further confirms that King was publicly accessible before 2010. Dr. King attests that he is the author of King (his Ph.D. dissertation) and that he submitted King to the University of Michigan for publication in 2006. Ex. 1028, ¶2. King comprehensively described Dr. King's research that had been presented and published in numerous papers prior to his dissertation. *Id.*, ¶¶3-4. Further, leading up to his dissertation defense, Dr. King presented his work in at least a dozen academic symposia, often using the exact title of King for the presentations. *Id.*, ¶5. Dr. King explains that individuals attending his presentations or reading his earlier

publications would have been directed to King, and with reasonable diligence, could have located it via library records or the University of Michigan website using his name or the title of his dissertation. *Id.*, ¶3. Dr. King also confirms that the title of his dissertation, “Analyzing Intrusions Using Operating System Level Information Flow” was sufficiently descriptive to be discoverable through keyword searches such as “computer intrusions” and/or “operating system level information flow.” *Id.*, ¶8. His thesis advisor, Dr. Peter Chen, also maintained a publicly accessible University of Michigan website documenting these publications and presentations, including a description and direct link to King, as evidenced by an archived version of Dr. Chen’s website from 2007. *Id.*, ¶6. Demonstrating that interested researchers could find King, it was cited by at least one academic article published in the Association for Computing Machinery (ACM) journal in 2008. *Id.*, ¶7.

III. The Ranking Paper, PO’s Response, and the Impact re King

As explained in the Ranking Paper, ambiguity exists as to how PO intends to interpret “association.” Paper 3, 1-2. To account for the possibility that PO may advocate a narrow construction of “association,” Petitioner filed IPR2025-00067, which relies on King in all proposed grounds. *Id.* Petitioner also filed IPR2025-00069, which applies a broader interpretation of “association,” and which does not depend on King for all grounds. Because the broader interpretation aligns with the intrinsic record, Petitioner ranked IPR2025-00069 as its preferred petition. The

Ranking Paper explained that PO could render moot IPR2025-00067—and with it, the instant King evidentiary issue—by confirming that it does not intend to advocate for the narrow construction. *Id.*, 5. PO declined this offer, ignoring the meaning of “association” entirely and leaving open the possibility that it may advocate for the narrower construction accommodated by IPR2025-00067 (and requiring reliance on King). Because PO leaves open that it may advocate for a narrow construction, the Board should institute IPR2025-00067 and -69. PO’s refusal to address the key issue underlying the Ranking Paper also introduced confusion regarding the ultimate impact of the instant King evidentiary issue. First, if the Board determines that the broad interpretation of “association” is correct, it need not address the public accessibility of King at all and should institute IPR2025-00069, which is Petitioner’s preferred petition and for which institution does not depend on King’s public accessibility. Second, if the Board leaves open the possibility that either the narrow or broad interpretation of “association” *could be* correct, it should institute all four petitions. In doing so, it should reject PO’s challenge to the sufficiency of King’s public availability evidence, allowing Petitioner to further develop the relevant record post-institution if needed. Indeed, because IPR2025-00069 relies on King for certain dependent claims, the King record will be developed post-institution in those proceedings. Thus, denying institution of IPR2025-00067 based on allegedly inadequate public availability evidence would not enhance efficiency.

Dated: March 25, 2025

Respectfully submitted,

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**CERTIFICATE OF SERVICE ON PATENT OWNER
UNDER 37 C.F.R. § 42.105(a)**

Pursuant to 37 C.F.R. §§ 42.6(e) and 42.105(b), the undersigned certifies that on March 25, 2025, a complete and entire copy of this Petitioner's Reply to Patent Owner's Preliminary Response and Exhibits were served on Patent Owner via email at the following address:

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