

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

OKTA, INC.,
Petitioner,

v.

THALES DIS FRANCE SAS,
Patent Owner.

IPR2026-00278
Patent 11,387,982

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

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EX1015	Rescorla, IETF RFC 2818, “HTTP over TLS,” May 2000, <i>available at</i> https://datatracker.ietf.org/doc/html/rfc2818 on January 9, 2026 (“Rescorla-2”)
EX1016	Krawczyk, IETF RFC 5869, “HMAC-based Extract-and-Expand Key Derivation Function (HKDF),” May 2010,

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EX1035	Westerinen, et al., IETF RFC 3198, Terminology for Policy-Based Management, November 2001, available on May 27, 2024 (“Westerinen”)

- EX1036 Dang, “Recommendation for Applications Using Approved Hash Algorithms,” NIST SP 800-107 Rev. 1, August 2012, *available at* <https://nvlpubs.nist.gov/nistpubs/Legacy/SP/nistspecialpublications800-107r1.pdf> on February 7, 2026 (“Dang”)
- EX1037 Lee, *et al.*, “Lee, D.C., Ke, Q. and Isard, M., 2010, September. Partition min-hash for partial duplicate image discovery. In European Conference on computer vision (pp. 648-662). Berlin, Heidelberg: Springer Berlin Heidelberg (“Lee”)
- EX1038 U.S. Pat. App. Pub. No. 2017/0286544 (“Hunt”)
- EX1039 Chum, *et al.*, “Scalable Near Identical Image and Shot Detection,” In Proceedings of the 6th ACM international conference on Image and video retrieval (pp. 549-556), July 2007 (“Chum”)
- EX1040 Chum, *et al.*, “Near Duplicate Image Detection: min-Hash and tf-idf Weighting,” *Bmvc* (Vol. 810, pp. 812-815), September 2008 (“Chum-2”)
- EX1041 “Secure Hash Standard (SHS),” Federal Information Processing Standards Publication, FIPS PUB 180-4, August 2015, *available at* <https://nvlpubs.nist.gov/nistpubs/FIPS/NIST.FIPS.180-4.pdf> on February 7, 2026 (“SHS”)
- EX1042 U.S. Pat. App. Pub. No. 2013/0290521 (“Labovitz”)
- EX1043 U.S. Pat. App. Pub. No. 2013/0254833A1 (“Nicodemus”)
- EX1044 Damianou, *et al.*, “The ponder policy specification language,” In International Workshop on Policies for Distributed Systems and Networks (pp. 18-38). Berlin, Heidelberg: Springer Berlin Heidelberg, January 2001 (“Damianou”)
- EX1045 U.S. Pat. App. Pub. No. 2014/0331225 (“Helander”)

EX1046	Sutcu, <i>et al.</i> , "A secure biometric authentication scheme based on robust hashing," in Proceedings of the 7th Workshop on Multimedia and Security, August 2005 (pp. 111-116) ("Sutcu")
EX1047	U.S. Pat. App. Pub. No. 2008/0189758 ("Akeel")
EX1048	U.S. Pat. App. Pub. No. 2007/0220061 ("Tirosh")
EX1049	Lorch, <i>et al.</i> , "First experiences using XACML for access control in distributed systems." In Proceedings of the 2003 ACM workshop on XML security, pp. 25-37. 2003 ("Lorch")
EX1050	Verma, <i>et. al.</i> , (2002). Policy-based management of content distribution networks. IEEE network, 16(2), 34-39. ("Verma")
EX1051	Lobo, <i>et. al.</i> , (1999). A policy description language. AAI/IAAI, 1999, 291-298. ("Lobo")
EX1052	Stone, <i>et al.</i> , 2001. Network policy languages: a survey and a new approach. IEEE network, 15(1), pp.10-21. ("Stone")
EX1053	Gonçalves, <i>et al.</i> , 2009, October. A graphical user interface for policy composition in CIM-SPL. In 2009 International Conference on Ultra Modern Telecommunications & Workshops (pp. 1-7). IEEE. ("Gonçalves")
EX1054	Shay, et al., "Encountering stronger password requirements: user attitudes and behaviors." In Proceedings of the sixth symposium on usable privacy and security, pp. 1-20. 2010. ("Shay")
EX1055	Moses, <i>et al.</i> , "eXtensible Access Control Markup Language (XACML) Version 2.0," Committee Draft 04, December 6, 2004 ("Moses")
EX1056	U.S. Pat. No. 6,460,050 ("Pace")
EX1057–1058	RESERVED

- EX1059 Krawczyk, *et al.*, “HMAC-based Extract-and-Expand Key Derivation Function (HKDF),” IETF RFC 5869, *available at* <https://datatracker.ietf.org/doc/html/rfc5869> on February 12, 2026 (“Krawczyk”)
- EX1060 “Programming languages — C++,” International Standard ISO/IEC 14882, Second Edition, October 15, 2003 (Excerpts)
- EX1061 “Let’s Encrypt Stats,” *available at* <https://web.archive.org/web/20181019221028/https://letsencrypt.org/stats/> on February 14, 2026
- EX1062 “HTTPS encryption on the web – Google Transparency Report,” *available at* <https://transparencyreport.google.com/https/overview> on February 18, 2026.
- EX1063 Swami, *et al.*, “QoS web service Security Access Control Case Study Using HTTP Secured Socket Layer Approach,” Proceedings of the International Conference on Engineering & MIS, pp. 1-9 (2015)
- EX1064 Chen, *et al.*, “Client-Aware Cloud Storage,” IEEE 30th Symposium on Mass Storage Systems and Technologies (MSST), pp. 1-12 (2014)
- EX1065 Petitioner’s Stipulation Dated April 10, 2026
- EX1066 Prosecution History of EP18800679.5
- EX1067 <https://www.thalesgroup.com/en/investor-relations/share-and-shareholding> (retrieved May 29, 2026)

I. INTRODUCTION

This case warrants referral and institution for three reasons. *First*, there are clear material errors. For one, although a specific limitation was the sole basis for allowing the '982 Patent to issue, the Examiner failed to insert it into Claim 9, handing Patent Owner Thales DIS France SAS (“Thales”) a broader-than-intended patent right. *Second*, this proceeding risks no duplication of effort because Petitioner Okta Inc. (“Okta”) brought its challenge exclusively before the Board. *Third*, Thales has no settled expectations that preempt review of the '982 Patent. This patent was issued less than four years ago, and Thales itself canceled a claim similar to Claim 9 in a related foreign prosecution to address a prior art rejection.

To evade a merits review, Thales makes two peculiar arguments. *First*, Thales points to a lawsuit that it initiated against Okta in Germany over unrelated foreign patents. Why Thales believes an unrelated German lawsuit protects it from a merits review of an erroneously issued United States patent remains a mystery. *Second*, Thales accuses Okta of lacking significant domestic investment in the United States, ostensibly because Okta’s software runs on Amazon servers that *might* be manufactured in Asia. At best, that argument is a distraction: Okta is an American company that employs thousands of Americans to build and provide cybersecurity software, including software used to protect our nation’s infrastructure. Thales’s

misguided domestic-investment argument cannot distract from the fact that Thales is a foreign entity holding overbroad U.S. patents.

In sum, the need to correct material examination errors, the absence of any parallel validity proceedings on the '982 Patent, and the lack of settled expectations heavily favor referral and easily overcome Thales's bid for discretionary denial.

II. ARGUMENT

A. The Operative Facts Weigh Strongly Against Discretionary Denial

1. This Challenge Cures Material Examination Errors by Exposing Overlooked Claim Defects and Missed Prior Art

The '982 Patent was issued because of clear, material examination errors. For one, the Examiner inexplicably granted Claim 9 without incorporating the very subject matter that the Examiner deemed necessary for allowance.

As Okta's Petition explains, the Examiner's Notice of Allowance included an amendment adding to the '982 Patent's Claims 1, 8, and 10 the limitations of:

wherein said at least one context data element is a *captured image* represented as a string of bits with a fixed length for constituting said data packet, and wherein said hash is a byte stream generated from said string of bits representing said captured image for said data packet.

EX1002, 306–309; *see also* EX1001, 14:14–17, 14:62–64, 15:26–28; Pet. 8–10. The Examiner expressly identified these captured-image limitations as the basis for allowance, yet erred by failing to incorporate them into Claim 9. *Id.*; *see also* DD_Br. 5–7 (conceding that the “Examiner explicitly relied upon the above

limitations in allowing the claims”). As shown below, the result of this error in Claim 9 is a broad independent claim with just three functional requirements spanning forty words, without a trace of the captured-image limitations.

<p>9. A second authentication device, wherein the second authentication device is configured to: receive a generated hash; generate a hash distance between the generated hash and a predetermined reference hash; and authenticate successfully or not based on the generated hash distance.</p>

EX1001, 15:1–7.

No reasonable examiner would have issued Claim 9 in its original form under these circumstances. The Examiner initially rejected Claim 9 (originally numbered 24), and the Applicant did not submit any amendments or specific arguments for Claim 9’s patentability. *See* EX1002, 214–215, 271, 278. Without the captured-image limitations, the Examiner had no plausible reason to find Claim 9 allowable.

Overlooking this aspect of Claim 9 was a material error akin to those the Office has found sufficient to warrant referral. *See Volkswagen Grp. of Am., Inc. v. Longhorn Auto. Grp. LLC*, IPR2025-01064, Paper 9 at 2 (Oct. 10, 2025) (finding “the Office materially erred” because “the issued claims do not recite the limitation the patent examiner identified as the allowable subject matter”); *Skullcandy Inc. v. Earin AB*, IPR2025-00690, Paper 9 at 2 (Jul. 31, 2025) (finding “a material error by the Office” where “[t]he patent examiner identified a ‘wherein’ clause listing various structural features of an earbud housing as the reason for allowance” but “[t]he

challenged claims...do not recite those features”). Thales cannot reasonably argue otherwise, particularly after canceling a nearly identical claim in its counterpart European patent application to address a rejection. *See* EX1066 at 6 (conceding that “the claims on the first and *second* device and their dependent claims have been deleted”), 16–19 (rejecting all claims), 319 (original EP Claim 13: “A *second* authentication device...”); EX1001, Cover (30), 15:1–7 (Claim 9: “A *second* authentication device...”); *infra* § II.A.3 (claim comparison).

Besides overlooking the excessive breadth of Claim 9, the Examiner also erred in finding the captured-image limitations allowable in the first place. As Okta establishes in its Petition, the concept of an authentication method that generates and analyzes the hash of a captured image was well known before the ’982 Patent, and it was specifically taught by the asserted Starner and Leskovec references, which the Examiner never considered. Pet. 19–21, 32–34. A rejection of similar claims in Thales’s counterpart European patent application identifies even more prior art that teaches the captured-image limitations. EX1066 at 17 (interpreting the “D9” reference as teaching the steps of “captur[ing a] candidate image,” generating a “locality sensitive hash,” sending the hash “to the remote server for authentication,” and applying “a distance function (e.g., Hamming)”). That both Okta’s Petition and the EPO’s rejection unearthed prior art that the Examiner overlooked is compelling proof of a material error. *See Microsoft Corp. v. ParTec Cluster Competence Center*

GmbH, IPR2025-00318, Paper 9 at 2–3 (Jun. 12, 2025) (finding “persuasive evidence that the Office erred in a manner material to patentability of the challenged claims by overlooking the teachings of [two uncited references]”); *Ecto World LLC v. Rai Strategic Holdings Inc.*, IPR2024-01280, Paper 13 at 5 (PTAB May 19, 2025) (precedential) (explaining that a material error occurs when “the asserted prior art was not a basis for rejection during examination, is not substantially the same as prior art the Examiner applied, and includes specific teachings that impact patentability of the challenged claims” (internal quotes omitted)).

Thales’s only retort is to suggest that Starner’s teaching of eye-scan image data (the claimed “captured image”) provided in a “1024-byte data record” somehow fails to render obvious the rudimentary limitation of “a string of bits with a fixed length.” DD_Br. 10–11; *see also* Pet. 19–21, 32; EX1003 ¶¶123–126, 153–155. But Okta’s Petition addresses this limitation explicitly:

For example, “the digital template may include a 1024-byte record (32x32x1 byte grayscale or color).” [EX1004, [0077]]. Thus, like the ’982 Patent, SLC’s context data element(s) (e.g., eye-scan image(s) or other biometric data) are represented as ***a string of bits with a fixed length*** (e.g., a “1024-byte data record”) for constituting the digital template.

Pet. 21 (emphasis altered). A “byte” is a string of eight bits, and Starner specifies a fixed length of 1,024 bytes (or 8,192 bits). Nothing in the ’982 Patent’s specification

or claims requires anything more. *See* EX1001, 6:43–52 (discussing an example where the fixed-length bit string is simply “image data relating to the user 11 face”).

2. This Challenge Has No Parallel Proceedings and Poses No Risk of Inconsistent Outcomes or Duplicated Efforts

There is no risk of duplicated efforts because the validity defects in the ’982 Patent are solely before this Office for direct and efficient resolution. The informative case of *Amgen Inc. v. Bristol-Myers Squibb Co.* is directly on point. There, the Acting Director observed that “the parties are not currently engaged in a parallel proceeding involving the challenged patent[]” and explained that this factor “counsel[s] *against* discretionary denial” because “there is currently no concern of inconsistent outcomes and duplication of efforts.” *Amgen*, IPR2025-00601, -00602, -00603, Paper 9 at 2 (Jul. 24, 2025) (informative). The same is true here. Moreover, Okta goes a step further than the petitioner in *Amgen* by offering a broad *Sotera*+ stipulation that binds Okta in any future litigation between the parties on the ’982 Patent far more than the statutory § 315(e)(2) estoppel. *See* EX1065. As in *Amgen*, referral and institution of Okta’s present challenge would serve the AIA’s core purpose of providing a true alternative to district court or ITC litigation.

3. This Early Challenge Promotes Robust, Predictable Patent Rights Without Upsetting Settled Expectations

Thales has no settled expectations of validity and is apparently aware that the ’982 Patent has defects. The ’982 Patent was issued less than four years ago on July

12, 2022, and retains a substantial term. This posture mirrors the *Amgen* case, where the Acting Director referred a petition challenging a patent issued in 2022 that had “not been in force for a significant amount of time.” *Amgen*, Paper 9 at 2. Referral is likewise warranted here, as “early” challenges foster “robust, predictable patent rights and weigh against discretionary denial.” *Sun Pharm. Indus., Inc. v. Nivagen Pharm., Inc.*, IPR2025-00893, Paper 18 at 2 (Sep. 19, 2025) (informative).

Thales “has not sufficiently articulated [any] reasons” why such a young patent would command settled expectations. *Amgen*, Paper 9 at 2. Beyond a vague and unsubstantiated licensing claim, Thales offers no discussion on this topic at all. DD_Br. 1–3. Regardless, any putative settled expectations of validity are undercut by the ’982 Patent’s European counterpart application. As discussed, this counterpart application stands rejected by the EPO, and Thales tellingly canceled a claim mirroring the ’982 Patent’s defective Claim 9. *See* EX1066 at 6, 16–19, 319; EX1001, Cover (30), 15:1–7.

’982 Patent Issued Claim 9	Canceled EP Claim 13
A second authentication device, wherein the second authentication device is configured to: receive a generated hash; generate a hash distance between the generated hash and a predetermined reference hash; and authenticate successfully or not based on the generated hash distance.	A second authentication device (16), characterized in that the second authentication device is configured to: receive a generated hash; generate a hash distance between the generated hash and a predetermined reference hash; and authenticate successfully or not based on the generated hash distance.

B. Patent Owner Provides No Valid Reason for Discretionary Denial

The facts of this case show that Okta’s Petition is ripe for referral to the merits stage. The few points Thales raises to avoid review of the ’982 Patent all fail.

1. The German Litigation Involves Unrelated Foreign Patents That Are Irrelevant to This Challenge

Thales first argues that discretionary denial is warranted because it sued Okta in Germany. But Thales admits that this German litigation involves “unrelated” foreign patents and is an “unrelated” dispute. DD_Br. 1–3, 8–9. Thales seems to think it can immunize the defective patents in its U.S. portfolio by suing a competitor elsewhere. Thales is incorrect. This argument does not favor denial.

2. Patent Owner Fails to Show Relevant United States Manufacturing Investments

Thales misleads by urging discretionary denial in the name of Director Squires’ memorandum on *Additional Discretionary Institution Considerations – U.S. Manufacturing and Small Business Use of AIA Proceedings* (“the Director’s Memo”). See DD_Br. 7 (“The Squires Memo Favors Denial”).

Even if a patentee’s domestic investments wholly unrelated to the challenged patent or any accused product were pertinent under the Director’s Memo, Thales has established no such investments. The patentee here is Thales DIS France SAS. But the sole source of alleged domestic manufacturing referenced in Thales’s brief is attributed to two different legal entities—the parent company, Thales Group, and a

distinct subsidiary called Thales Defense and Security Inc.—neither of which is the patentee or an identified real party-in-interest. DD_Br. 4 (citing EX2003 and EX2004). These non-party entities and their putative domestic manufacturing investments are not relevant. And to the extent Thales Group is pertinent, its largest voting rights holder appears to be a foreign government. *See* EX1067 at 6 (indicating that the “French state” holds 36.35% “of total number of voting rights”).

Finally, Thales argues that Okta does not have a sufficient “presence in the U.S.” because Okta’s software runs on “Amazon Web Services,” and “servers such as those utilized for Amazon Web Services[] are manufactured in Asia.” DD_Br. 9. But Okta’s domestic presence is beyond debate. It is a matter of public record that Okta is a U.S. cybersecurity company, founded and headquartered in San Francisco with additional offices across the country.¹ Okta employs thousands of Americans who develop the very cybersecurity solutions securing major federal identity systems, two-thirds of the Fortune 100, and the USPTO itself.²

It is surprising that Thales, a French entity, chose to raise domestic presence and investment as a primary point in its brief. But since it has, Okta points out that

¹ *E.g.*, <https://www.okta.com/company/>.

² *E.g.*, <https://www.thalesgroup.com/en/investor-relations/share-and-shareholding>;
<https://www.uspto.gov/about-us/usptogov-account/secure-authentication>.

shielding an erroneously issued and foreign-controlled patent like the '982 Patent from an early validity challenge raised by an American company like Okta would be a disservice to the United States economy, security, and public interest.

Okta respectfully requests that this matter be referred for a merits review.

Respectfully submitted,

Dated June 5, 2026

/Kenneth Wayne Darby Jr./
Kenneth W. Darby, Jr., Reg. No. 65,068
Nicholas Stephens, Reg. No. 74,320
Ryan Chowdhury, Reg. No. 74,466
Fish & Richardson P.C.
60 South Sixth Street, Suite 3200
Minneapolis, MN 55402
T: 202-783-5070
F: 877-769-7945

Counsel for Petitioner

CERTIFICATE OF SERVICE

Pursuant to 37 CFR § 42.6(e)(4), the undersigned certifies that on June 5, 2026, a complete and entire copy of this Petitioner's Opposition to Patent Owner's Request for Discretionary Denial and its accompanying exhibits were provided by email to the Patent Owner by serving the correspondence email addresses of record as follows:

FINNEGAN, HENDERSON, FARABOW, GARRETT & DUNNER LLP
Joshua L. Goldberg, Joshua.goldberg@finnegan.com
James G. Bell, james.bell@finnegan.com

Attorneys for Patent Owner

/Esther Goldschlager/
Esther Goldschlager
Fish & Richardson P.C.
60 South Sixth Street, Suite 3200
Minneapolis, MN 55402
goldschlager@fr.com