

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

JUMIO CORPORATION,
Petitioner

v.

FACETEC, INC.,
Patent Owner

Case IPR2025-00109

U.S. Patent No. 11,874,910

PATENT OWNER'S RESPONSE

[REDACTED]

[REDACTED]

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I. Introduction

Kevin Tussy solved the longstanding problem of verifying the physical, living presence of an online user during an online transaction without specialized hardware. FaceTec's technology has proven exceptionally effective, leading to impressive commercial success with [REDACTED]

[REDACTED] in 2024 and copying by multiple competitors, including its former customer, Petitioner Jumio, and Jumio's supplier/indemnifier/partner in litigation, iProov.

Petitioner failed to show that any challenged claim is unpatentable, and new evidence further demonstrates that the Petition is defective for failing to name all real parties in interest.

II. Objective Evidence of Nonobviousness Confirms Patentability

Petitioner presents litigation-driven positions, riddled with hindsight, after being sued for copying FaceTec's technology. Before litigation, Petitioner repeatedly praised FaceTec's 3D liveness detection technology, calling it a "genius solution that is easy to use and is extremely strong and spoof proof." Ex. 2057, 11:10. Petitioner's CEO similarly praised the software's "streamlined user experience," and Petitioner credited FaceTec's solution as providing Petitioner "a significant competitive advantage in terms of speed, accuracy, and anti-spoofing capabilities." Ex. 2079, 2. Now Petitioner argues that FaceTec's "genius

[REDACTED]

solution”—which Petitioner paid FaceTec [REDACTED] to license—would have been obvious. Ex. 2058. Petitioner’s arguments in this IPR are hindsight.

The obviousness analysis must avoid even a hint of hindsight. *Mintz v. Dietz & Watson, Inc.*, 679 F.3d 1372, 1377-78 (Fed. Cir. 2012). Objective evidence of nonobviousness provides a necessary safeguard against hindsight and is part of—not in addition to—the obviousness analysis. *Id.* Objective evidence “may often be the most probative and cogent evidence in the record” and thus “must always when present be considered en route to a determination” about obviousness. *Transocean Offshore Deepwater Drilling, Inc. v. Maersk Drilling USA, Inc.*, 699 F.3d 1340, 1349 (Fed. Cir. 2012) (internal quotation omitted).

Here, FaceTec’s evidence of industry praise, copying, long-felt need, failure of others, licensing, industry skepticism, and commercial success demonstrates nonobviousness.

A. FaceTec’s Technology and Business Model

FaceTec is the industry-leading provider of 3D liveness detection technology. Ex. 2059, ¶7. The biometric security¹ field has faced a longstanding

¹ Biometric security (which uses biometric data to perform secure authentication) is a specific subset of the larger field of biometrics (which can include the unrelated field of securing biometric data). Ex. 2061, ¶29 (“Turk”).

challenge regarding fraud prevention and, more specifically, how to reliably distinguish between a live, 3D user and a spoofed image or video. Many online functions rely on biometric identity verification software, yet conventional systems are easily “spoofed” by a two-dimensional photo of a face or a prerecorded video of a face; other solutions require expensive, complex systems. *Id.* ¶6; Ex. 1001, 5:26-31. FaceTec’s patent, implemented by its software, solves these problems, ensuring a living person is present in front of the camera at the time biometric data is collected. Ex. 2059, ¶7; Ex. 1001, 14:14-21.

Importantly, the claimed techniques avoid the need for specialized hardware, such as three-dimensional camera systems or infrared cameras (such as those built into Apple’s iPhones™ used in Face ID™). Ex. 2059, ¶¶27-28. In contrast, FaceTec’s software, which can be implemented on virtually any camera-equipped computing device, requires the user to take at least one facial image at a first distance from the camera and at least another at a second distance from the camera. *Id.*, ¶¶10-16, 28. [REDACTED]

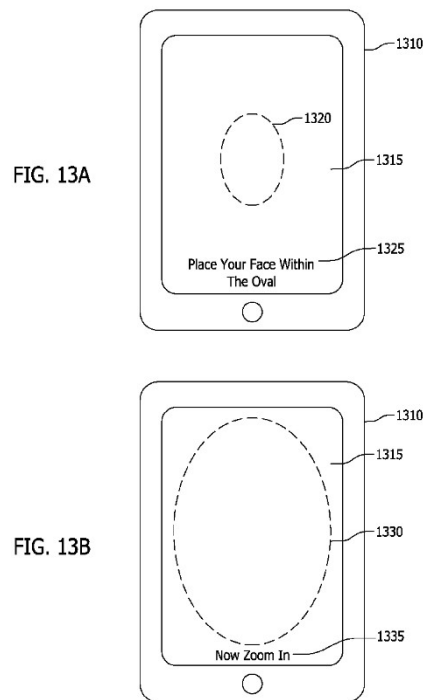
[REDACTED] *Id.*, ¶¶17-24. Perspective distortion is the apparent change in an object’s shape or size resulting from the camera’s relative position and angle. *Id.*, ¶¶7-8. When appropriately present, perspective distortion can be used to verify that the source of the images is 3D. *Id.*

The images below depict expected changes in the appearance of a 3D face when the capture distance is changed. Ex. 2059, ¶25. Perspective distortion causes the user's nose to swell in proportion to the rest of the face in the second image as compared to the first image. *Id.*



Ex. 2059, ¶25. FaceTec's patented software detects perspective distortion and other expected differences by examining at least two images taken at different distances.

Id. Indeed, the patent teaches how to conveniently obtain user images at a first and then second distance. For example, as shown in Figures 13A and 13B below, an oval can be presented on the user's screen, guiding the user to fill that oval with his or her face during image capture. *See, e.g.*, Ex. 1001, 28:1-32:15. The size of the oval can be changed, prompting the user to change the distance between his or her face and the camera. *Id.*



After capturing images at different distances, “[p]rocessing occurs on both images” to detect this perspective distortion and other expected differences between the images. Ex. 1001, 32:29-31; Ex. 2059, ¶25.

FaceTec’s entire business is licensing its software, and [REDACTED], the only feature customers paid for was the performance of 3D liveness checks. Ex.

2059, ¶¶47-48. All other features were optional and offered free of charge. *Id.*,

¶48. [REDACTED]

[REDACTED] *Id.*, ¶49.

B. FaceTec’s Software Has a Nexus to the Challenged Claims

Objective evidence of nonobviousness must have a nexus to the merits of the claimed invention. *WBIP, LLC v. Kohler Co.*, 829 F.3d 1317, 1331 (Fed. Cir. 2016) (citations omitted). Nexus is presumed when the “asserted objective evidence is tied to a specific product and that product embodies the claimed features, and is coextensive with them.” *Polaris Indus., Inc. v. Arctic Cat, Inc.*, 882 F.3d 1056, 1072 (Fed. Cir. 2018) (quotations and citations omitted). The evidence demonstrates both a presumed nexus and a direct nexus.

Nexus should be presumed because FaceTec’s software embodies and is coextensive with the challenged claims. The fundamental feature of FaceTec’s software is performing 3D liveness checks, which meet each element of the challenged claims. FaceTec’s software runs on a computing device having a camera, screen, processor, and memory configured to store machine readable instructions that are stored on the memory of the authentication server. Ex. 2059, ¶10. FaceTec’s software confirms a user’s face is three-dimensional by capturing at least one facial image of the user at a first distance from a camera, capturing at least one facial image of the user at a second distance from the camera, and

comparing data from the images for expected differences, such as the presence of appropriate perspective distortion. Ex. 2059, ¶¶9-24. FaceTec’s software embodies and is coextensive with independent claims 1, 10, and 22. Turk, ¶¶456-58.

Accordingly, and set forth in the claim charts in Dr. Turk’s declaration, nexus should be presumed. *WBIP*, 829 F.3d at 1331. Moreover, as explained below, each objective indicia of nonobviousness is due to the merits of the claimed invention, and thus, a nexus exists between the claimed invention and the objective indicia even if nexus is not presumed. *Id.*

C. Competitors Praised FaceTec’s Software

“Industry participants, especially competitors, are not likely to praise an obvious advance over the known art.” *Apple Inc. v. Samsung Elecs. Co.*, 839 F.3d 1034, 1053 (Fed. Cir. 2016). Accordingly, praise for the invention, including awards, is evidence of the invention’s nonobviousness. *WBIP*, 829 F.3d at 1334-35. FaceTec’s software received numerous certifications and awards and has been praised in the industry, including by Petitioner.

FaceTec was the first company to earn both Level 1 and Level 2 certifications in iBeta Quality Assurance’s Presentation Attack Detection (“PAD”) evaluation of its ZoOm® software. Exs. 2078, 2037 (conducted in accordance with ISO/IEC 30107-3); *see also* Ex. 2036; Ex. 2038; Ex. 2039; Ex. 2040;

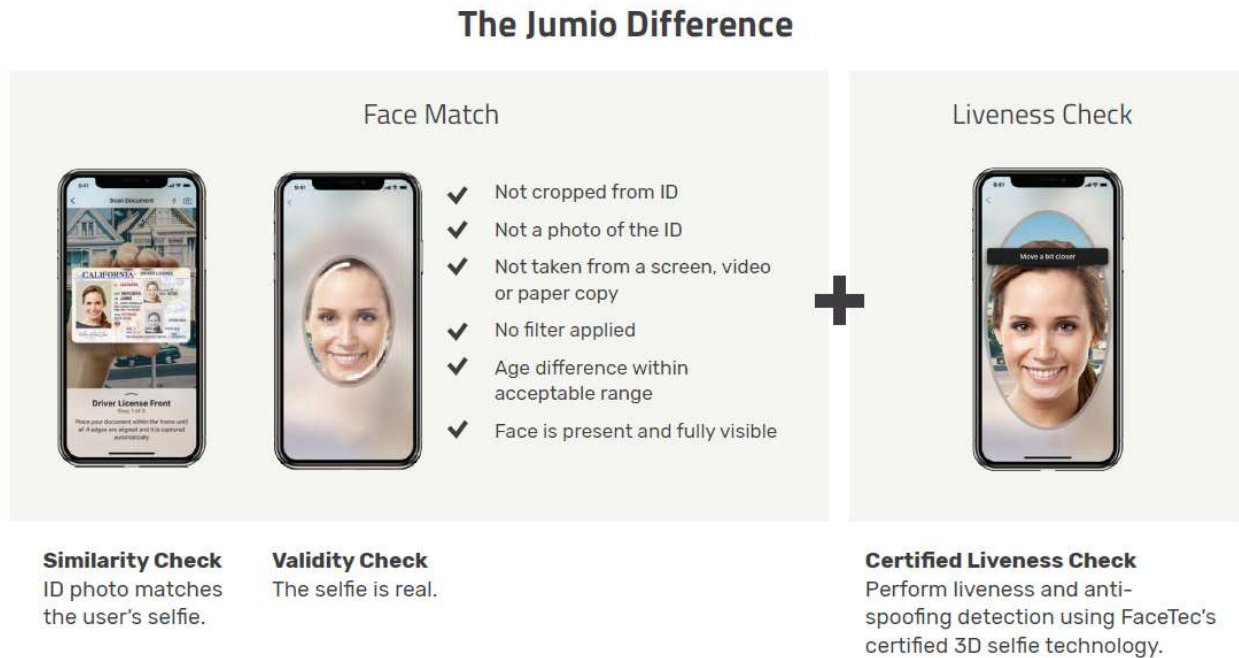
Ex. 2041; Ex. 2059, ¶47. In doing so, FaceTec’s software passed a rigorous series of tests (Ex. 2078), leading to the industry lauding FaceTec as “stand[ing] head and shoulders above the rest” (Ex. 2064, 2).

Petitioner itself has praised FaceTec’s technology, calling it a “genius solution that is easy to use and is extremely strong and spoof proof.” Ex. 2057, 11:10. Petitioner touted FaceTec’s software as “the most accurate and secure solution” to spoofing threats. Ex. 2079, 2. Petitioner’s Chief Product Officer stated, “[t]he interface is intuitive and the liveness detection AI is by far the strongest we have ever seen.” *Id.* Petitioner’s CEO similarly praised the software’s “streamlined user experience.” *Id.* Petitioner credited FaceTec’s software as providing Petitioner “a significant competitive advantage in terms of speed, accuracy, and anti-spoofing capabilities.” *Id.*

Petitioner also recognized that “[i]n the world of liveness detection, there is a large distinction between certified and uncertified methods.” Ex. 2042, 3. Petitioner applauded FaceTec for receiving “perfect scores in testing guided by the ISO 30107 biometric standard,” noting that “[b]etween the two levels of certification, FaceTec successfully stopped more than 3,300 spoof attempts over the course of 12 days of rigorous testing.” *Id.*; Exs. 2037, 2078.

Petitioner’s praise was for the claimed invention. Petitioner’s marketing materials featured FaceTec’s 3D liveness detection technology, and specifically the

claimed features, front and center, clearly showing the far image (small oval) and the close image (larger oval) being captured for processing and subsequent analysis.



Ex. 2044, 2. Petitioner explained that with FaceTec's technology, "users just fit their face into a small oval on the screen, and the oval gets larger and the user move[s] closer to fit into the second oval." Ex. 2045, 2. Even Petitioner recognized that the FaceTec software it licensed was patented. *Id.*, 2; Ex. 2073.

This praise for FaceTec's technology disclosed and claimed in the Challenged Patent, from Petitioner no less, is substantial evidence of nonobviousness.

D. iProov and Petitioner Copied FaceTec’s Software

“[E]vidence of copying tends to show nonobviousness.” *WBIP*, 829 F.3d at 1336 (citations omitted); *see also Liqwd, Inc. v. L’Oreal USA, Inc.*, 941 F.3d 1133, 1138 (Fed. Cir. 2019). Copying “is probative of nonobviousness because it suggests the competitor saw value in the invention that he could not achieve without copying.” *Medtronic, Inc. v. Teleflex Innovations S.a.r.l.*, 70 F.4th 1331, 1339 (Fed. Cir. 2023) (“*Medtronic II*”) (citations omitted). Copying may be established by evidence of access to and substantial similarity with a patented product. *Medtronic II*, 70 F.4th at 1340. Here, iProov and Petitioner had access to FaceTec’s patented software and released software substantially similar to FaceTec’s patented software.

1. iProov

[REDACTED]

[REDACTED]

iProov then copied FaceTec’s claimed software and introduced a competing biometric liveness detection technology called “Liveness Assurance.” Ex. 2059, ¶¶34-46. iProov’s Liveness Assurance software is substantially similar to FaceTec’s and utilizes user images at different distances to verify the user is a 3D human. *Id.*, ¶46.

In 2019, FaceTec implemented its “Spoof Bounty Program.” Ex. 2059, ¶30. After agreeing to FaceTec’s terms and conditions, participants gain special access to FaceTec’s software for the limited purpose of trying to spoof the system into believing that a live person is present when they are not. *Id.* If successful, participants must send FaceTec details of the attack so FaceTec can mitigate the threat. *Id.*

FaceTec offers participants a bounty (monetary reward) for successful attacks. Ex. 2059, ¶31. The amount is based on the type of attack and currently includes several threats and bounty payouts:

How to Participate in the Bounty Program

Read and agree to the Terms and Conditions outlined below, and then successfully Spoof or Bypass FaceTec’s Liveness Detection with a method that qualifies as Level 1, 2, 3, 4 or 5 on the [Liveness.com](#) Threat Vector Scale, reproduce it, and be paid a bounty as follows:

Threat	Description	Example	Bounty
Level 1	Hi-res paper & digital photos, hi-def videos exhibiting challenge/response and human-worn paper masks.		Browser, iOS, & Android: \$30,000 \$90,000 Total
Level 2	Commercially available lifelike dolls, and resin, latex & silicone 3D masks up to USD\$300 in price.		Browser, iOS, & Android: \$30,000 \$90,000 Total
Level 3	Custom-made ultra-realistic 3D masks, sculptures, wax heads, etc. up to USD\$3,000 in creation costs.		Browser, iOS, & Android: \$40,000 \$120,000 Total
Level 4	Successfully decrypt & edit the contents of a 3D FaceScan to contain synthetic data not collected from the session, have the Server SDK process it and respond with Liveness Success.	3D FaceScan Tampering	Browser, iOS, & Android: \$60,000 \$180,000 Total
Level 5	Successfully take over the camera feed & inject previously captured frames that result in the Server SDK responding with Liveness Success.	ManyCam Vcam vlc2Cam FakeWebcam	Browser, iOS, & Android: \$40,000 \$120,000 Total

Id.; Ex. 2046, 1.

Due to the extensive access provided, participants must agree that they cannot reverse engineer FaceTec's technology and use it in any other liveness detection offering, and participants must hold all information learned strictly confidential. Ex. 2059, ¶32.

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

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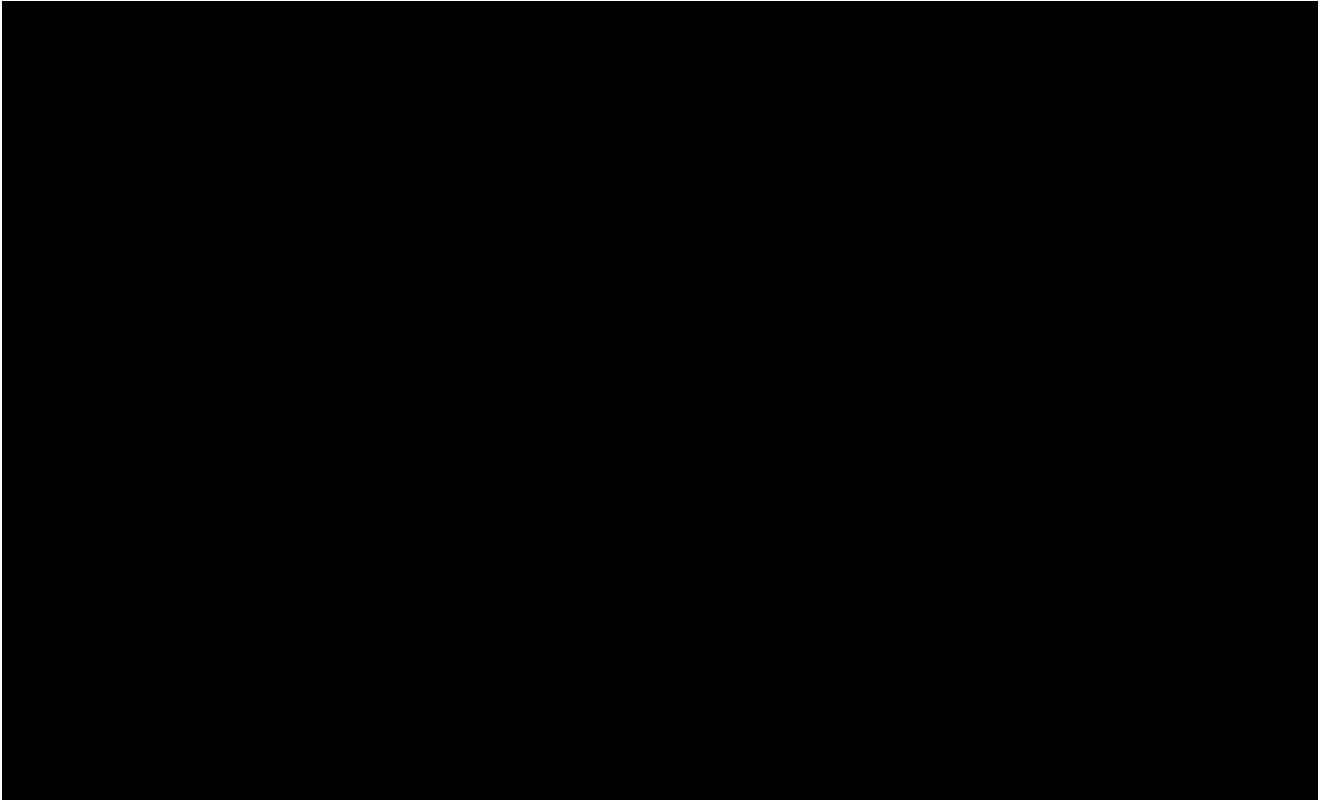
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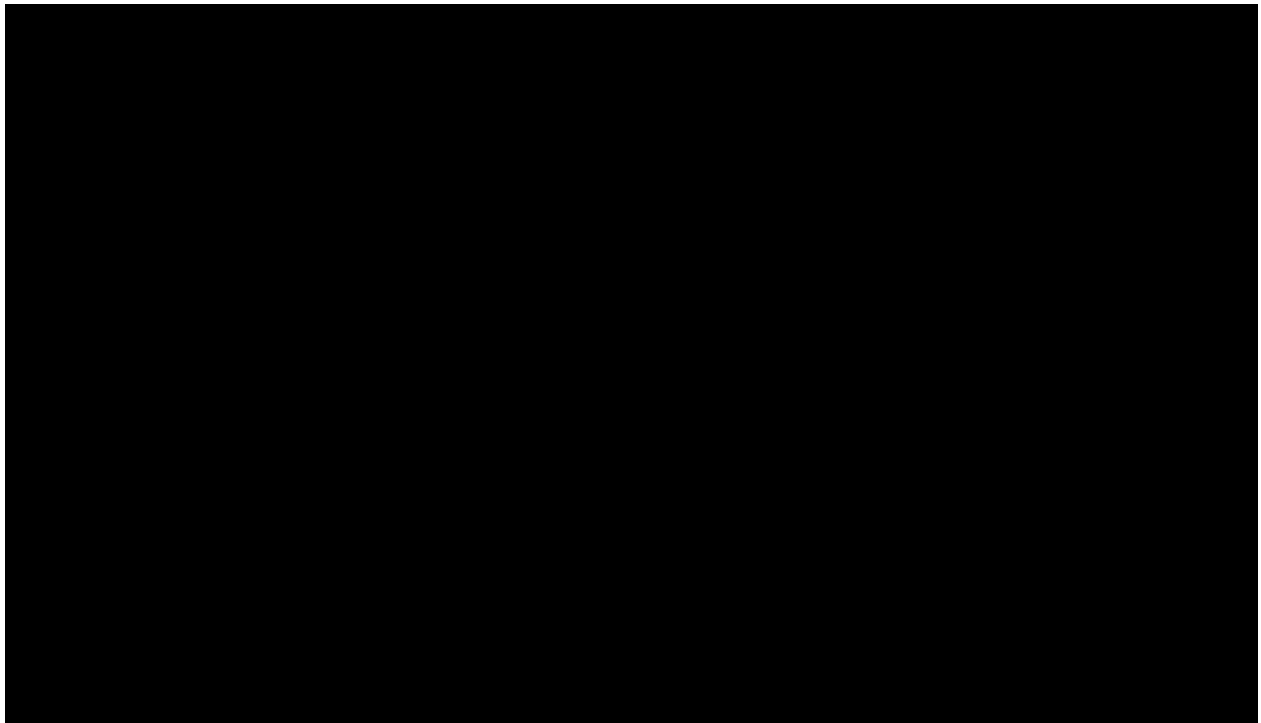


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In late 2020, following extensive access to FaceTec’s technology, iProov released its competing “Liveness Assurance” technology. Ex. 2059, ¶45.

According to iProov’s web site, iProov attempts to verify that an online user is “[a] real person – this person is a human being and not a photo, a mask, or other presentation attack.” Ex. 2060, 5.

iProov’s software, like FaceTec’s patented software, utilizes user images at different distances. Turk, ¶467. The iProov user interface presents an oval and forces the user to move in or out by detecting the initial face size and then



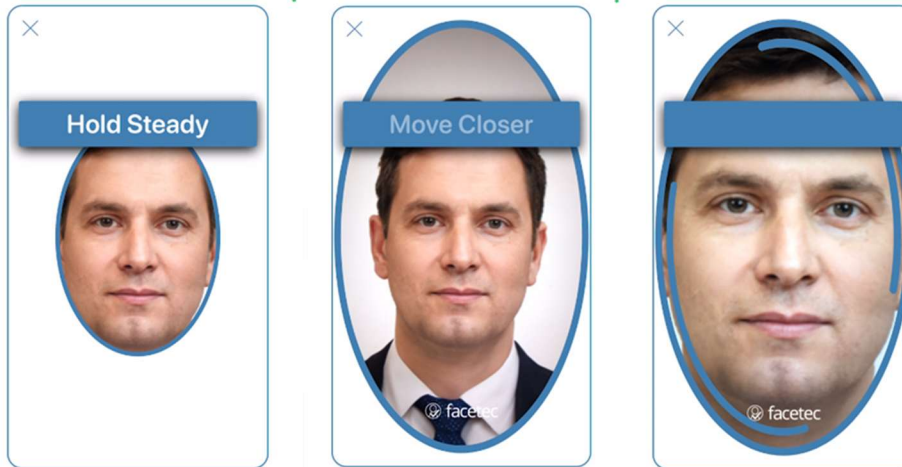
changing the displayed area of the background while leaving the oval size the same. *Id.* While FaceTec’s technology changes the size of the oval and leaves the displayed area of the background the same, the result is the same: the user is forced to change their distance from the camera to complete the session. *Id.* Accordingly, iProov’s software is substantially similar to FaceTec’s patented software. *Id.*

This evidence of copying further supports the nonobviousness of the claimed invention.

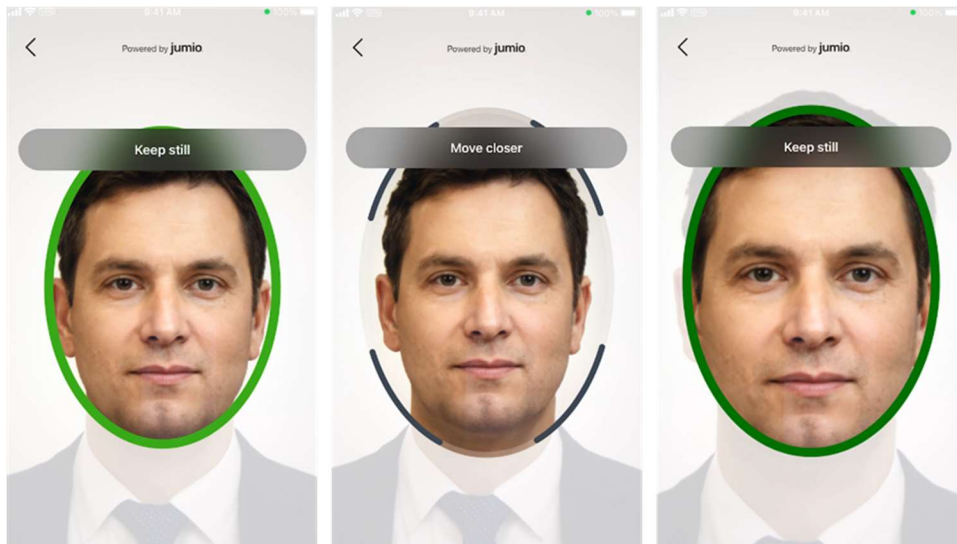
2. Petitioner

Petitioner licensed FaceTec’s software [REDACTED]. Ex. 2073; Ex. 2059, ¶50. During that time, Petitioner had unfettered access to FaceTec’s software and digital documentation. Ex. 2059, ¶50. Petitioner also had years of access to FaceTec’s developers for support. *Id.* In this nearly three-year period, Petitioner performed over [REDACTED] 3D liveness checks using FaceTec’s software. *Id.*

In 2021, Petitioner released its own competing liveness detection. Ex. 2077. Petitioner’s software is nearly identical to that of FaceTec’s software. Turk, ¶¶470-71. Like FaceTec’s software, Petitioner’s software provides a user interface that takes an image of the user at a first distance, instructs the user to “move closer,” and takes an image of the user at a second distance. *Id.* It then processes the images.



FaceTec's Software



Petitioner's Software

Ex. 2072 (showing spoof attempt). This copying evidences the nonobviousness of the claimed invention. *Medtronic II*, 70 F.4th at 1339-40.

E. FaceTec Satisfied a Long-Felt Need for a Secure Software-Based 3D Liveness Detection Technology that Others Tried but Failed to Meet and Instead Licensed FaceTec's Software

Evidence that a need existed for the patented invention and that others tried but failed to meet that need is particularly probative of nonobviousness. *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Pat. Litig.*, 676 F.3d 1063, 1081 (Fed. Cir. 2012). Whether a long-felt need is unmet is evaluated as of the filing date of the patent. *Procter & Gamble Co. v. Teva Pharms. USA, Inc.*, 566 F.3d 989, 998 (Fed. Cir. 2009). But “failure of others after a patent’s issue date may be more persuasive than failures that occur before.” *In re Cyclobenzaprine Hydrochloride Extended-Release Capsule Pat. Litig.*, No. CIV. 09-MD-2118-SLR, 2010 WL 3766530, at *2 (D. Del. Sept. 21, 2010).

Here, FaceTec satisfied a long-felt but unmet need for software-based 3D liveness detection not requiring specialized hardware. Others in the industry, including Petitioner, tried for years and failed to meet this need, instead licensing FaceTec’s software.

As biometric technologies became increasingly common in the early 2000s, critical vulnerabilities became apparent, including susceptibility to spoofing or presentation attacks with synthetic or forged biometrics. Ex. 2047, 1531. Over the next decade, the industry worked to address these vulnerabilities, and by 2014, “[t]he entire biometric community ... ha[d] thrown itself into the challenging task

of proposing and developing efficient protection methods against [spoofing].” *Id.*, Abstract; *Volvo Penta of the Americas, LLC v. Brunswick Corp.*, 81 F.4th 1202, 1215 (Fed. Cir. 2023) (finding a decade-long demand relevant to long-felt but unmet need). As those in the industry recognized, “the question [was] not any more whether or not biometrics [could] be copied or forged, but rather to what extent systems are robust to these attacks and if they incorporate the necessary countermeasures to detect them.” Ex. 2047, 1531.

Three primary anti-spoofing techniques² emerged: hardware-based techniques, software-based techniques, and score-level techniques. Ex. 2047, 1533-34. These techniques, however, presented a challenging engineering problem given the demanding requirements that they be (i) non-invasive, (ii) user friendly, (iii) fast, (iv) affordable, and (v) effective. *Id.*, 1533. Hardware-based techniques were generally more effective, while software-based techniques were generally less expensive, less intrusive, and more user-friendly. *Id.*, 1535. Score-level techniques were less common, presented a much lower performance, and were designed only to support hardware- or software-based techniques. *Id.* As of

² Anti-spoofing techniques are also referred to as liveness detection techniques. Ex. 2047, 1532.

the 2014 priority date, the industry still faced “big challenges” and called for “a new generation of more secure biometric systems.” *Id.*, 1548.

FaceTec provides that secure biometric system. As explained above, FaceTec’s pioneering 3D liveness detection technology was the first in the industry to earn Level 1 and Level 2 certifications in iBeta’s PAD evaluation. Ex. 2078; Ex. 2037; Ex. 2059, ¶47. Although the industry demanded and received a “clear and well-defined certification methodology to assess biometric security,” no company had achieved this industry-standard certification before FaceTec. Ex. 2047, 1546. And FaceTec did so with a software-based technique that met the other demanding requirements listed above. *See supra* §II.A.

Others in the industry, including Petitioner, tried and failed to meet this need. In 2016, Petitioner added a liveness detection feature. Ex. 2048, 2. This feature identified “minute facial movements”; however, it was quickly replaced with a different liveness detection feature, presumably because it was not effective. *Id.*; Ex. 2049, 1. This next liveness detection feature required mobile users to follow a moving dot on the device screen with their eyes during image capture (pupil tracking) and web users to create a handwritten note with a custom phrase and the current date and take a picture of themselves holding the note. Ex. 2049, 1-2.

To replace its own failed attempts, Petitioner licensed FaceTec’s software, describing it as “upgraded liveness detection functionality.” Ex. 2079, 2; Ex. 2059, ¶50. As detailed above, Petitioner repeatedly and publicly praised FaceTec’s software not only for its speed, accuracy, and anti-spoofing capabilities, but also for its intuitive interface and streamlined user experience. *See supra* §II.C. Petitioner also touted that FaceTec’s software was patented. Ex. 2045, 2; Ex. 2073.

FaceTec satisfied the long-felt need in the industry. It has over 250 direct customers and partners globally and, in 2024, was used [REDACTED] times annually. Ex. 2059, ¶¶28, 53. This is substantial evidence of nonobviousness.

F. The Industry Was Skeptical of FaceTec’s Software

If skilled artisans “are skeptical about whether or how a problem could be solved or the workability of the claimed solution, it favors non-obviousness.” *WBIP*, 829 F.3d at 1335. Here, the industry was skeptical that the claimed invention would provide secure 3D liveness detection.

In October 2017, shortly after FaceTec launched its 3D liveness detection technology, MIT Technology Review published an article expressing skepticism that FaceTec’s software-based 3D liveness detection technology would work. Ex. 2050. The article explains that some companies, like Apple, believed that the best way to detect 3D liveness was with hardware, like an infrared camera. *Id.*, 1.

Apple included this hardware in the “notch” of its iPhone despite much controversy that it was “ugly” and felt “like a compromise.” Ex. 2084, 1-2. The article then explains that FaceTec “is trying to bring a software-only take on 3-D face recognition to all kinds of smartphones.” Ex. 2050, 1.

Focusing on the claimed features, the article explains that FaceTec’s technology “pays attention to the distortion that occurs as you move your face closer to the phone’s camera, and analyzes how the distortion in images ... compare to that in images already stored on the phone.” *Id.*, 1-2. The author used FaceTec’s demo application to get a sense of how the technology works, and explained that “[t]o enroll, you take several rounds of selfies while holding the phone at two different depths (first, a bit more than a foot from your face, then several inches closer)” and “[t]o log in, you do the same thing once more, holding the phone in front of you, then closer.” *Id.*, 2.

But industry leaders were skeptical. For instance, Marios Savvides, director of the CyLab Biometrics Center at Carnegie Mellon, was “not sure if it could prevent someone with a mask from accessing the handset (something Apple noted that it trained Face ID to avoid).” Ex. 2050, 2. Rich Mogull, analyst and CEO at security research company Securosis, stated that “being totally software-based means ‘it would need additional hardware protection to achieve equivalent levels of security’ to Apple’s face-scanning technology.” *Id.*, 3. He elaborated that

FaceTec’s technology “would be more secure than simple two-dimensional facial recognition,” but that he would be “shocked if it was as usable or secure as alternative methods we now see being adopted.” *Id.*

But FaceTec was the *first* company to earn Level 1 and Level 2 iBeta Quality Assurance PAD certifications, overcoming the industry’s skepticism and demonstrating nonobviousness. *Supra* §II.C.

G. FaceTec’s Software and iProov’s Copied and Infringing Software Are Commercially Successful

Commercial success evidence must be considered “so long as what was sold was within the scope of the claims.” *In re Glatt Air Techniques, Inc.*, 630 F.3d 1026, 1030 (Fed. Cir. 2011) (quotations and citation omitted). Commercial success is typically shown by significant sales in the relevant market. *PPC Broadband, Inc. v. Iancu*, 739 F. App’x 615, 625 (Fed. Cir. 2018). Additional factors that may be relevant include sales growth and displacement of other products in the marketplace. *Volvo*, 81 F.4th at 1213-14. Here, FaceTec’s software falls within the scope of the claims and, since its release in 2017, has demonstrated overwhelming commercial success.

FaceTec’s 3D liveness detection technology was the first of its kind and effectively created the market for secure software-based 3D liveness detection, displacing 2D facial recognition technologies, particularly in high-risk industries.

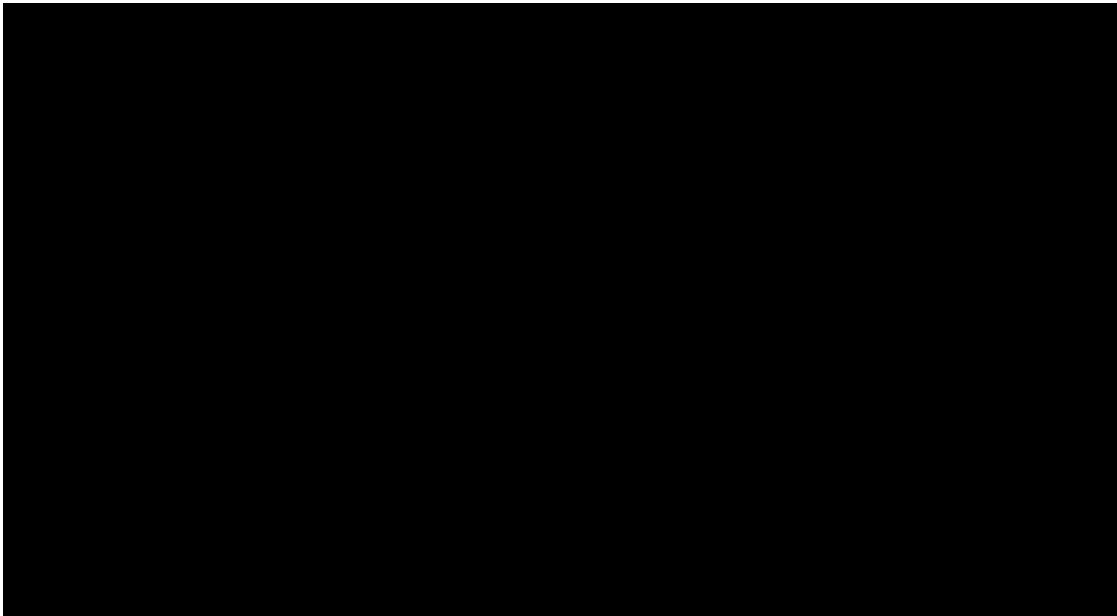
See supra §II.E. In its first full year (2019), FaceTec’s software garnered [REDACTED]

[REDACTED] Ex. 2059, ¶52. That number rapidly increased by [REDACTED] in 2020, and between 2020 and 2021, [REDACTED]

[REDACTED] *Id.* This rapid growth is indicative of a disruptive technology and breakthrough product. Since 2021, revenues have steadily increased, even in the face of increasing marketplace competition by, e.g., Petitioner and iProov. *Id.*

[REDACTED]

[REDACTED] *Id.*



Indeed, due to its ability to work effectively with low-cost devices with low camera resolutions, FaceTec’s software enabled over [REDACTED] distinct 3D liveness checks globally in 2024. *Id.*, ¶28. Today, FaceTec’s software is used by over 250 direct customers and partners globally, including PayPal, Experian,

Match Group, U.S. Department of Homeland Security, and Canadian Parliament.

Id., ¶53.

Because iProov copied FaceTec, this is further evidence of the commercial success of FaceTec’s software. *Gambro Lundia AB v. Baxter Healthcare Corp.*, 110 F.3d 1573, 1579 (Fed. Cir. 1997).

The commercial success of FaceTec’s software is due to the merits of the claimed invention and its ability to conveniently perform 3D liveness checks with virtually any camera-enabled device. *See supra* §II.A-B. the performance of 3D liveness checks was the only feature that customers paid for, and in fact, many customers use only this feature. *Id.*

Although the 3D liveness checks are multilayered, the first check confirms that a user is 3D by comparing images taken at different distances for expected differences in biometric data, such as the presence of appropriate perspective distortion and differences. Ex. 2059, ¶49. This first layer eliminates 2D photo/video impersonation attacks, which are the most common attacks. *Id.* As such, FaceTec’s 3D liveness detection technology—the most important component of which is the claimed invention—is driving demand, and customers license

FaceTec's software because of the strength of its 3D liveness detection technology. Ex. 2059, ¶¶47-55.

The commercial success of FaceTec's software is not due to other factors. FaceTec was not the market incumbent, for example. In fact, FaceTec's software for 3D liveness detection was its first product, and thus, FaceTec had no brand recognition or goodwill. Ex. 2059, ¶54. Further, FaceTec engages in very few marketing efforts. FaceTec's marketing budget is [REDACTED] and FaceTec primarily limits its marketing efforts to attending conferences and purchasing search engine keywords. *Id.*, ¶55. What little marketing FaceTec does touts the software's 3D liveness security and the simplicity of use with any camera-enabled device. *Id.*; Ex. 2062.

Additionally, the success of FaceTec's software is not due to the software's other customer-facing features. All features other than the performance of 3D liveness checks are optional and were offered free of charge. *See supra* §II.A. [REDACTED]

[REDACTED] *Id.* The success of FaceTec's software was, and remains, attributable to its 3D liveness detection technology, which is within the scope of the claimed invention. This is substantial evidence of nonobviousness.

III. Petitioner's Reliance on Dr. Daft Is Misplaced

A. Petitioner's Definition of the Level of Skill Is Too Low and Embraces Unrelated Fields

Jumio selected a level of skill to fit their declarant's irrelevant experience. It does not sufficiently account for experience with three-dimensional computer vision systems for facial recognition—technology at the heart of the Challenged Patent.

Petitioner proposes that a person of ordinary skill in the art (“POSITA”) would have at least “a Bachelor’s degree in electrical engineering, computer engineering, computer science, physics, or a related field, and two years’ work experience related to biometrics, facial authentication, computer vision, *and/or* optics, such that they would have had significant academic and/or work experience in both software development and optics.” Pet., 5³.

This embraces people with irrelevant experience, like optometrists or those working with Optical Character Recognition (OCR). For example, someone having work experience exclusively in *two-dimensional* computer vision techniques or with handwriting- or iris-based biometrics would qualify. But that individual would lack necessary experience with biometric *security, three-dimensional* computer vision, *and* facial authentication—all necessary expertise to

³ All emphasis added unless noted otherwise.

understand the Challenged Patent. Turk, ¶39; *Kyocera Senco Indus. Tools Inc. v. Int’l Trade Comm’n*, 22 F.4th 1369, 1376 (Fed. Cir. 2022).

Petitioner’s inclusion of broad fields such as “optics” or “computer vision” do not solve the deficiency because this purported POSITA would lack the necessary understanding of the mathematical modeling of expected differences or distortions in facial images and the problems faced in the biometric security industry. Turk, ¶¶40-41.

Petitioner’s proposed definition notably lacks any academic or practical experience in biometric security or facial authentication—the Challenged Patent’s very fields. Turk, ¶42. Petitioner’s broad reference to “biometrics” does not suffice because experience with data relating to odor, gait, fingerprints, or DNA would plainly not qualify one to sufficiently understand the challenges of the Challenged Patent. Ex. 1018, 3 (listing many kinds of biometrics); Turk, ¶43.

Instead, a POSITA would have needed industry experience with three-dimensional computer vision systems for facial recognition to understand and appreciate the industry and technical problems addressed by the patents. Turk, ¶¶44-46.

B. The Appropriate Level of Skill Requires Biometric Security, Facial Authentication, and Three-Dimensional Computer Vision

The appropriate level of ordinary skill is:

a Bachelor's degree in electrical engineering, computer engineering, computer science, physics, or a related field, and two years' work experience related to biometric **security**, facial authentication, **and three-dimensional** computer vision such that they would have had significant academic and/or work experience in both **facial** biometrics and **computer vision**.

Biometric *security* is a requirement because there are many broader areas of solely biometrics that have nothing to do with the Challenged Patent, like gait or DNA analysis. Turk, ¶¶45-46; Ex. 1018, 3. A POSITA must have specialized knowledge regarding facial authentication and facial biometrics. Three-dimensional computer vision is also a requirement here because of the need to understand how computers process distortion from objects at different distances from a sensor. Turk, ¶46.

C. Dr. Daft Does Not Qualify Under Either Definition

Dr. Daft has not amassed the necessary years of experience under either definition. Ex. 2082 (“Daft Depo”), 13:8-23 (fingerprint work only lasted “a few weeks”); *see also id.*, 68:13-19, 74:1-11. Regardless, Dr. Daft’s purported experience with biometrics (fingerprinting) is not relevant to the patent and does not qualify him to testify about facial authentication. *Id.*, 24:10-25:7; Turk, ¶49.

His experience with ultrasonic imaging is equally irrelevant and does not translate to capturing facial images, let alone determining whether expected distortions result from movements of the camera or user. Turk, ¶49.

Moreover, Dr. Daft has not been “qualified by the courts as an expert on ... biometric security.” Ex. 1003, ¶17. And his prior cases had nothing to do with biometric security. Ex. 1004, 9; Daft Depo, 25:20-26:2, 48:2-51:17, 52:3-53:11, 56:14-59:6; *see also id.*, 59:16-25, 60:16-21 (lacking experience in facial biometric security and noting partial disqualification in at least one case); Ex. 2034, 9-12 (same).

Dr. Daft’s lack of relevant experience led to a fundamental misunderstanding of core terms in this case. Dr. Daft attempted to link one of his past patent applications (Ex. 2033) to the field of “biometric security” by repeatedly stating that it relates to *securing* biometric data (e.g., encrypting it). Daft Depo, 35:13-38:25. But biometric security relates to *using* biometric data (like facial images) to secure *something else*. Turk, ¶¶51-53.

Dr. Daft’s lack of experience and misunderstanding of the field led him to propose obviousness positions and reach conclusions that one of ordinary skill would never reach. Without basing his analysis and opinions on a sound understanding of facial authentication and biometric security technologies, Dr.

Daft's testimony should be given no weight. *See Sundance, Inc. v. DeMonte Fabricating Ltd.*, 550 F.3d 1356, 1363-64 (Fed. Cir. 2008).

In contrast, FaceTec's expert witness, Dr. Turk, is qualified to offer expert testimony here because he meets either party's proposed level. Turk, ¶48.

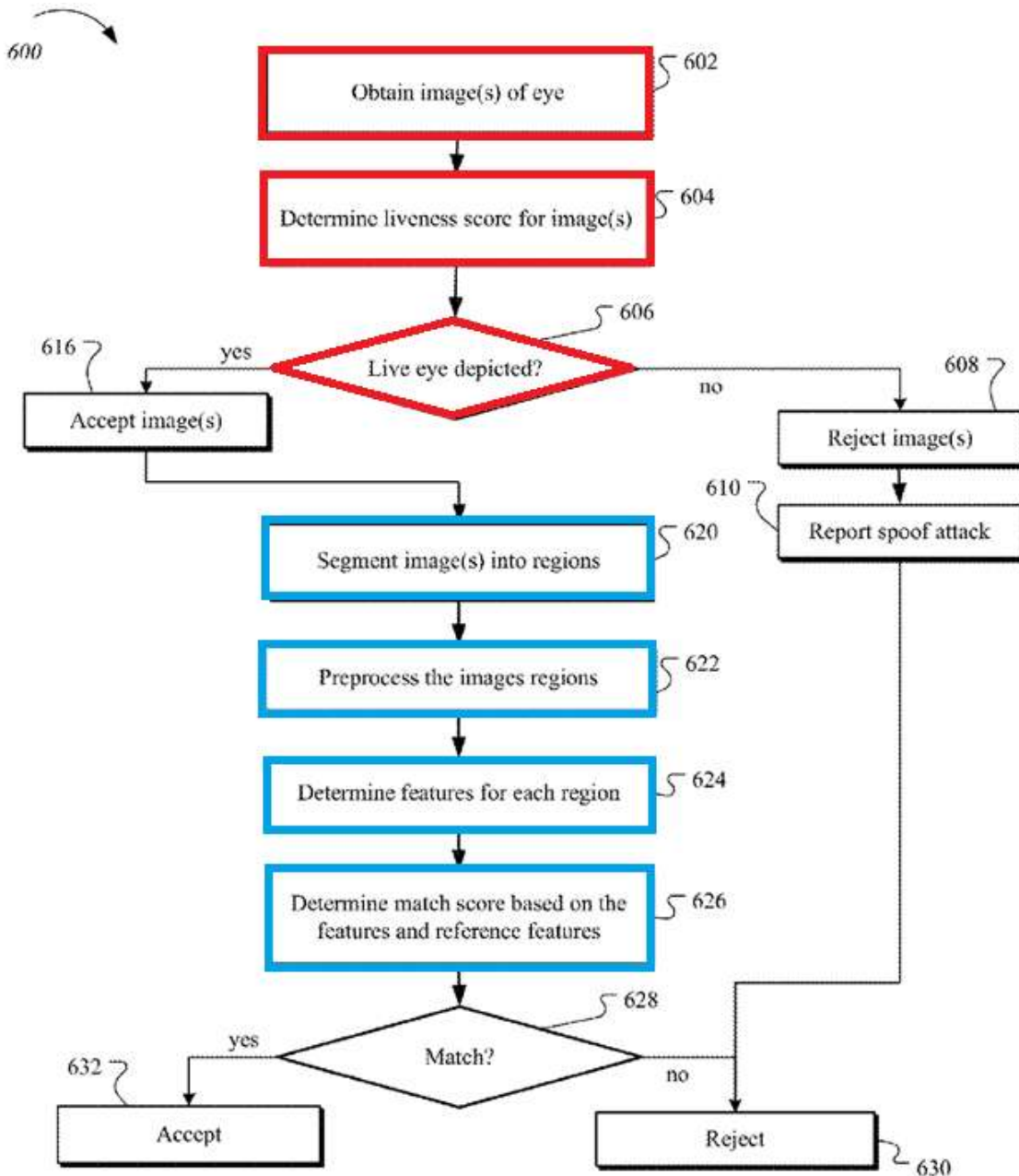
IV. Petitioner's Cited Prior Art Focuses on Issues Unrelated to the Challenged Claims

None of the references cited by Petitioner relate to the core subject matter at issue. The Challenged Patent is directed to systems and methods for authenticating the three-dimensionality and liveness of a user's face by analyzing expected distortion patterns across multiple images captured at different distances. *See supra* §II.A Derakhshani is limited to ocular spoof detection using images of the eye's vasculature. Zhang compares pixel-level intensity values between warped and unwarped images. Tanii performs aesthetic correction of image warp without detecting or evaluating facial features. Hoyos focuses on eye-based reflectance detection in financial transactions. No reference teaches or suggests the claimed invention.

A. Derakhshani

Derakhshani uses images of the eye to determine whether a user's eye is real or fake. Ex. 1005, Abstract, 1:6-7. It evaluates "[d]istinctive features of an individual's visible vasculature in the white of the eyes" to "identify or authenticate the individual." *Id.*, 4:19-24.

Figure 6 depicts Derakhshani's process using "one or more images of the white of an eye." *Id.*, 9:59-67. It performs **eye liveness detection (steps 602-606)** and **user authentication (steps 620-632)**:



Id., Fig. 6.

Determining liveness involves obtaining images of the user's eye (**step 602**), and determining a liveness score based on behavioral, reflectance, and spatial metrics of the images of the eye (**step 604**). *Id.*, 10:25-11:8; Fig. 7. The **spatial metric** assesses depth by determining the apparent distance of one or more *image* “**landmarks**” across images at different focus distances. *Id.*, 1:30-34; 2:17-21; 16:41-18:7.

Unlike the *anatomical* landmarks (used later for **authentication**) the *image* landmarks for the **spatial metric** may include non-anatomical features such as “background objects.” *Id.*, 16:51-54; Turk, ¶58. Derakhshani compares the degree of focus of these *image* landmarks across images to determine the depth of the eye relative to the camera's focal plane. *Id.*, 16:44-17:2.

The liveness score based on these metrics is used to determine if the images likely represent a live eye. *Id.*, 11:13-16; Fig. 6, **step 606**. If so (step 616), Derakhshani **compares the eye to a reference record**. *Id.*, 9:63-66, 11:42-14:58; Fig. 6, steps 616, 620-632. In **step 620**, Derakhshani segments the images to identify regions with “the best views of vasculature in the white of [the] eye.” *Id.*, 11:46-51. Unlike the *image* landmarks used to **determine eye liveness**, “*anatomical* landmarks” like the iris or eye corners are extracted to identify the regions of interest (*i.e.*, the sclera). *Id.*; Fig. 6, **step 620**. The regions are preprocessed (**step 622**), and biometric features are determined (**step 624**) and

matched against stored features in a reference record ([step 626](#)). *Id.*, 12:23-24, 13:9-14, 13:62-66. If the features match, the user is accepted ([step 632](#)). *Id.*, 14:25-58; Fig. 6, steps 628-632.

Derakhshani does not describe processing of or authenticating based on facial images. Its focus remains on ocular features and spoof detection using the “vasculature in the whites of the eyes.” *Id.*, 4:19-24. Petitioner presents images of faces that do not appear in Derakhshani. Pet., 8-9 (citing *unrelated* patents, Exs. 1011, 1012), 10, 23, 29 (depicting Dr. Daft’s creations, *see* Ex. 1003, ¶¶107,-08, 167-68).

B. Zhang

Zhang presents systems and methods for distinguishing live faces from flat representations, like photographs. Ex. 1006, Abstract; ¶¶[0003]-[0004]. Zhang captures images of a face and analyzes those images to determine whether the face is three-dimensional. *Id.*, ¶[0026], Fig. 3.

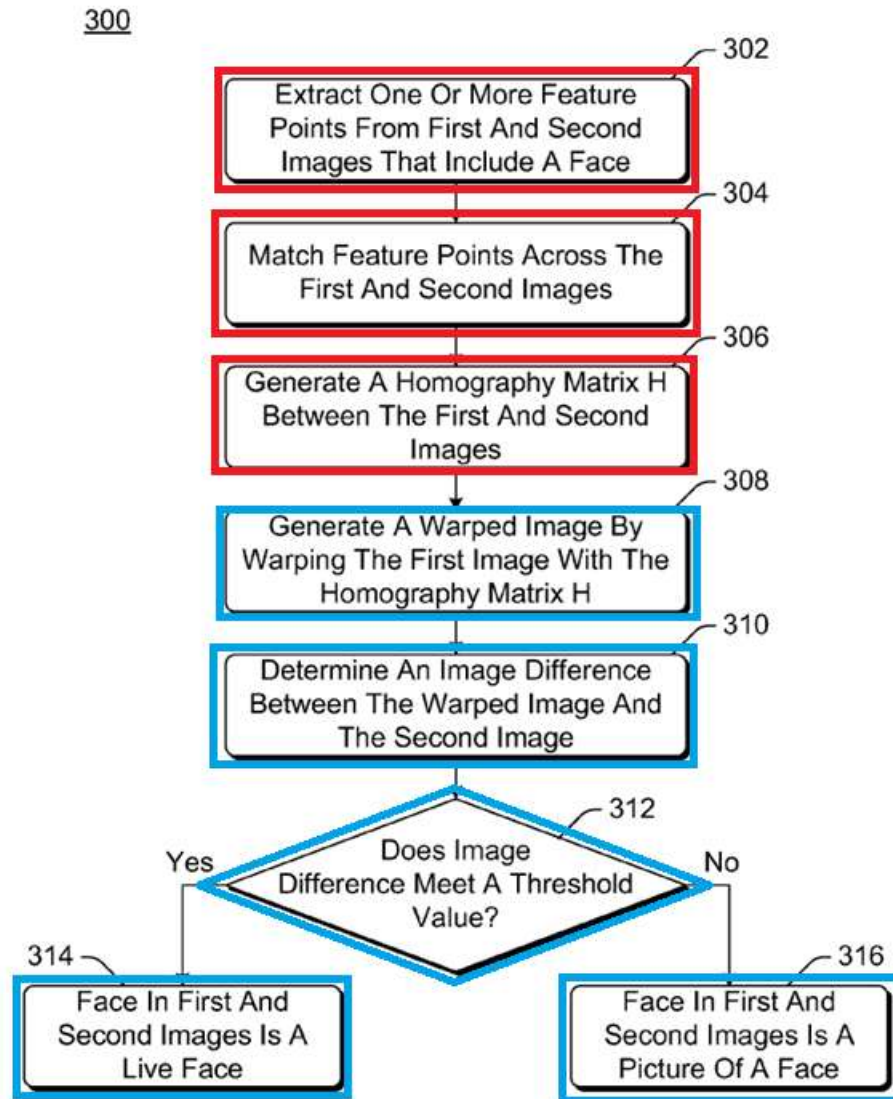


Fig. 3

Process 300 has two phases: **generating a matrix H using feature points in first and second images** (steps 302-306) and **using matrix H to compare images at selected locations in first and second images** (steps 308-316). Turk, ¶¶63-64.

In the **first phase** of process 300, Zhang **extracts regions of pixels known as “feature points”** (such as “a corner of an eye, a corner of a mouth, a tip of a nose”) from two images and **matches those points across the images** (steps 302-304). *Id.*, ¶¶[0024]-[0029]. These “feature points” may be as small as a single pixel and are used for image warping, not for identity verification. *Id.*, ¶¶[0026]-[0030]; Turk, ¶65.

In **step 306**, Zhang assumes the images lie on a flat surface and creates homography matrix H using the **extracted feature points**. *Id.*, ¶¶[0025], [0029]-[0030]; claim 3. H represents the difference between a location in the first image and the same location in the second image. *Id.*, ¶[0029].

In the **second phase** of process 300, Zhang uses the matrix H to **transform the first image to create a “warped” first image**, simulating how a flat surface would appear from a second perspective (**step 308**). *Id.*, ¶¶[0025], [0030]; Turk, ¶¶65-66.

In **step 310**, the **warped image is then compared to the second image** by calculating pixel-level differences in color or intensity at corresponding “**selected locations**.” *Id.*, ¶¶[0030]-[0032]. These locations are **not** the **feature points used to generate homography matrix H** but are used in **step 310** to determine differences in color/intensity at the same location in multiple images. *Id.*, ¶[0030]-[0033]. If the difference exceeds the threshold—because the differences in the color/intensity of

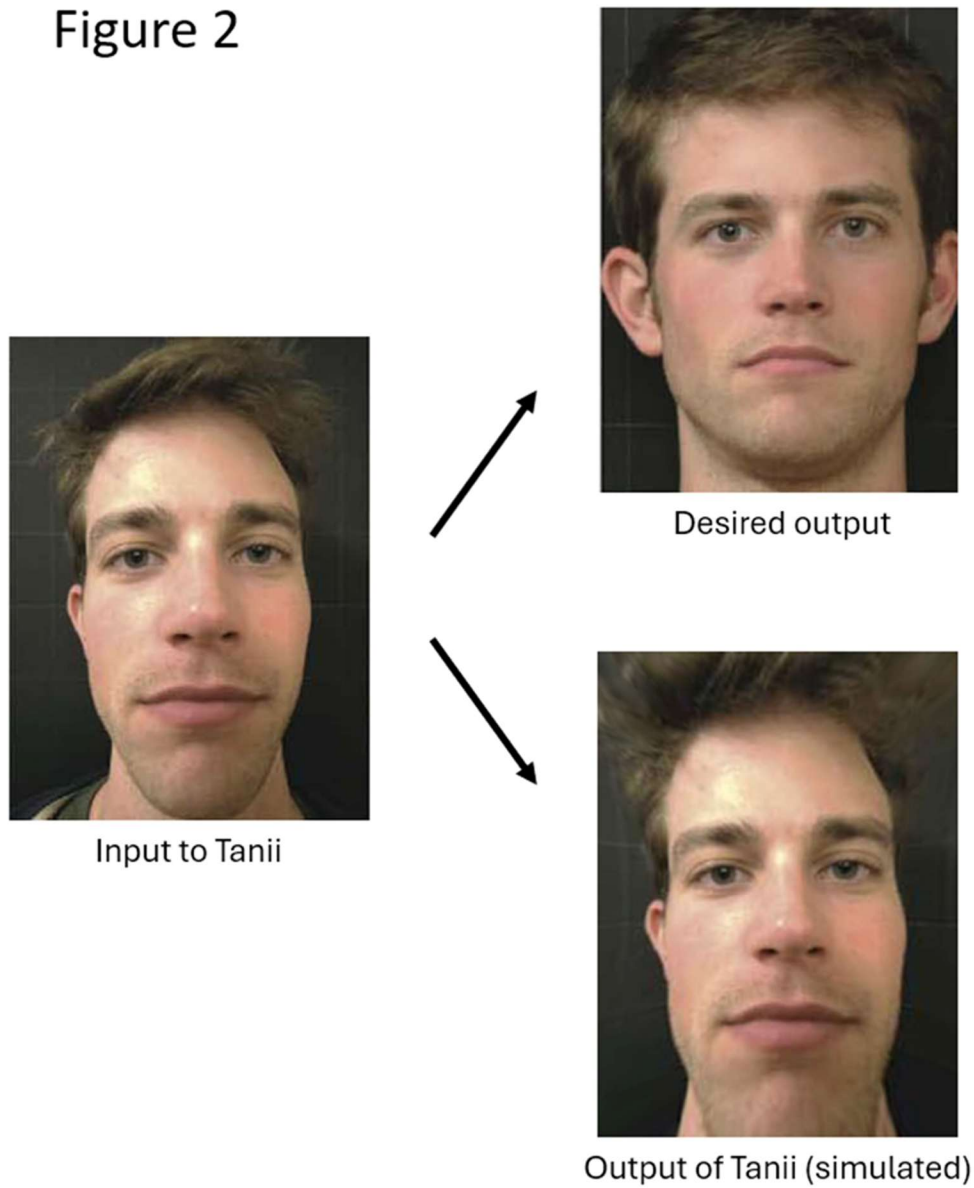
the pixels in each image are large—the face is deemed to be a live, three-dimensional structure (step 314); otherwise, it is considered a flat image (step 316). *Id.*, ¶¶[0030]-[0034]; Turk, ¶67. Zhang does not predict how a three-dimensional face will distort across views—it merely assumes flatness and tests that assumption. Turk, ¶68.

C. Tanii

Tanii corrects image warp in images captured at close range. Ex. 1007, Abstract, ¶[0003]. It enlarges peripheral areas relative to the center to produce a more visually aesthetic image. *Id.*, ¶[0056], Fig. 8; Turk, ¶69.

Tanii does not detect whether a face is imaged, and instead captures “object[s].” *See, e.g., id.*, ¶¶[0006], [0009]-[0013], [0045], [0047]-[0049], [0061]-[0063]; Turk, ¶70. It also relies on the object in the image being exactly centered. Ex. 1007, ¶[0072]. Given these assumptions, Tanii simply enlarges the peripheral areas of *any* image at a rate that is proportional to its distance from the center of the image. *Id.*, ¶[0056], Fig. 8. Tanii does not analyze the image’s content, or predict distortions. Tanii’s distortion correction is purely cosmetic, and would perform the same enlargement process regardless of whether ears are present or whether the image includes a face, and could result in a further distorted image. Turk, ¶¶71-73.

Figure 2

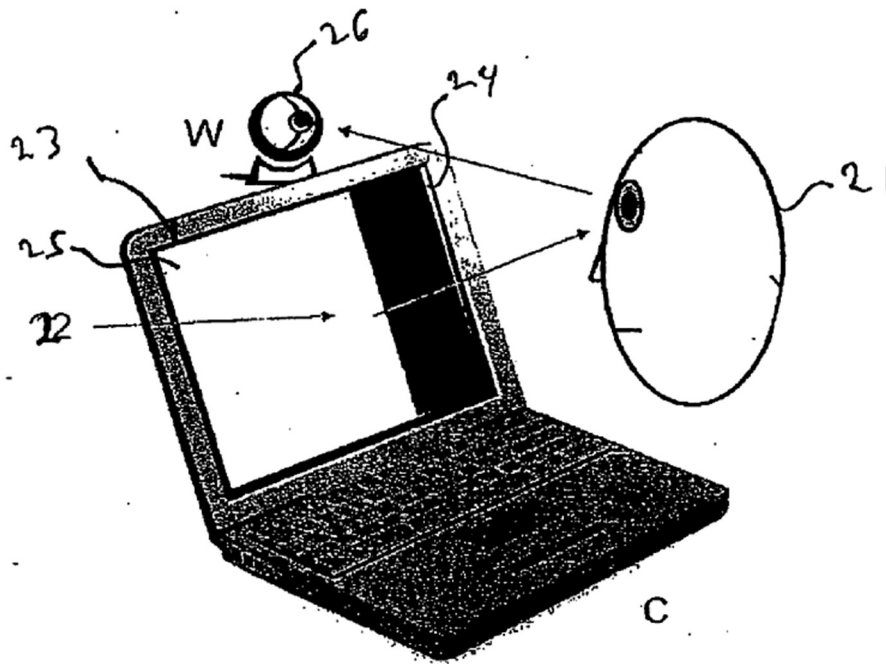


D. Hoyos

Hoyos teaches a system for biometric authentication that combines a measure of liveness with a biometric match. Ex. 1010, ¶[0011]-[0014]. Hoyos acquires biometric data from a person and calculates the probability of liveness (Pp) and the probability of a match (Pm). *Id.*, ¶[0017]. Pp is calculated by

presenting a first image on a screen, capturing a first reflection, presenting a second image, capturing another reflection, and comparing the reflections to determine if they were formed by a “curved surface consistent with a human eye.”

Id., ¶¶[0019], [0034]-[0035], Fig. 2:



In contrast, a probability of a match (P_m) is based on the user's face. *Id.*, ¶[0038]; Turk, ¶¶74-75.

V. Petitioner Failed to Show That Any Challenged Claim Is Unpatentable

Petitioner's obviousness challenges each fail because at least Derakhshani, Zhang, Tanii, and Hoyos separately and collectively fail to disclose or render obvious key limitations of the claimed invention. Tanii is not even analogous art.

A. Grounds 1A-1C: The Proposed Derakhshani Combination Fails to Show All of the Claimed Elements

1. Derakhshani’s “Spatial Metric” Does Not Represent the Face’s Three-Dimensionality

Petitioner contends that Derakhshani’s “spatial metric” is calculated “for the entire face” and represents whether a subject’s face is three-dimensional, as required by at least 1[pre], 1[d5-6], 10[pre], 10[f-g], 22[pre], 22[d-e]. Pet., 7. It is not calculated for the entire face—no “entire face” is ever captured—and does not represent three-dimensionality.

Derakhshani’s spatial metric is based on images of the eye taken at different focus distances (Ex. 1005, 1:56-2:3), each distance needing to be close enough to capture the characteristics of the eye. Turk, ¶¶355-356. Because Derakhshani needs to capture the vasculature (blood vessels) of a user’s eye; it does not involve facial recognition or depth analysis of the user’s head or face. It simply does not relate to the face-based teachings of the Challenged Patent. Ex. 1001, claim 1; Turk, ¶357.

Moreover, the spatial metric is “a measure of deviation of the subject from a *two-dimensional plane ... [or] an expected three-dimensional shape.*” Ex. 1005, 3:1-6, 17:27-36. This explanation in Derakhshani presumes a known plane or known model of an “expected” shape, and compares captured images to that expected plane/shape. The claims of the Challenged Patent, however, perform a

different process: detecting captured images having the “expected differences” resulting from the movement of a camera between taking the images. Turk, ¶358.

2. Derakhshani Does Not Capture the User’s Face

Derakhshani does not teach facial liveness detection by determining a user’s three-dimensionality, as required by at least [1pre]/10[pre]/22[pre] and 1[d5]/10[f]/22[d]. Derakhshani is explicitly directed to “biometric authentication based on *images of the eye*” by detecting eye vasculature. Ex. 1005, Abstract, 1:5-7. It captures images of the white of the eye (sclera) 230, iris 220, and pupil 210, and analyzes vasculature patterns 240. *Id.*, 5:1-41, Fig. 2:

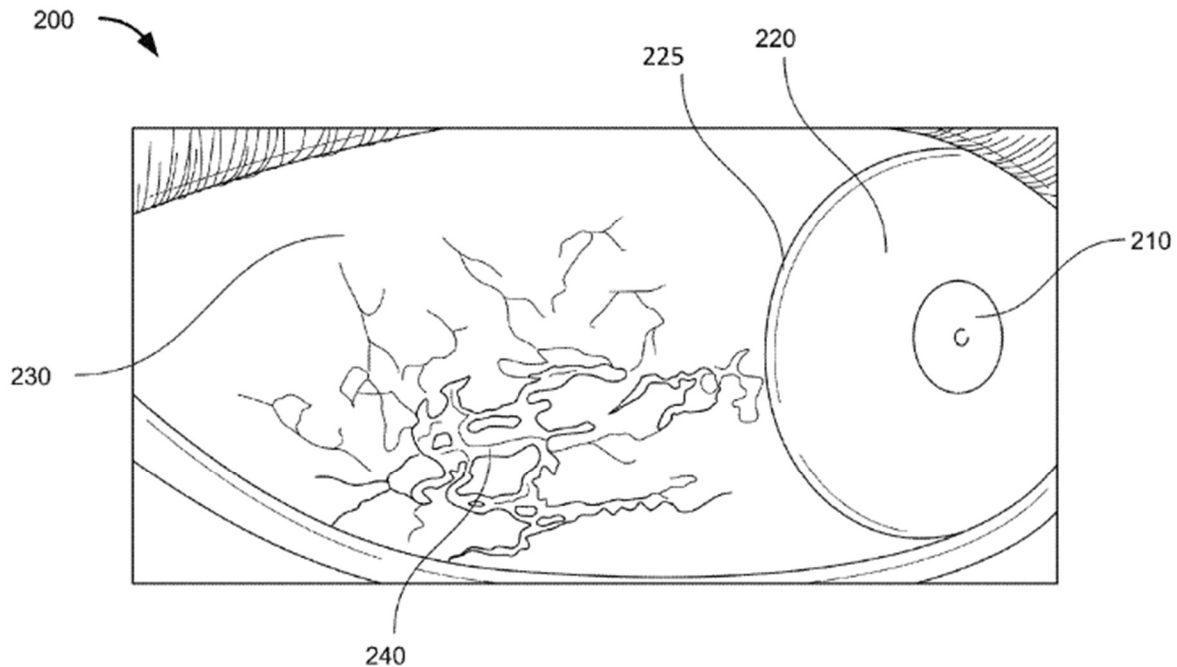
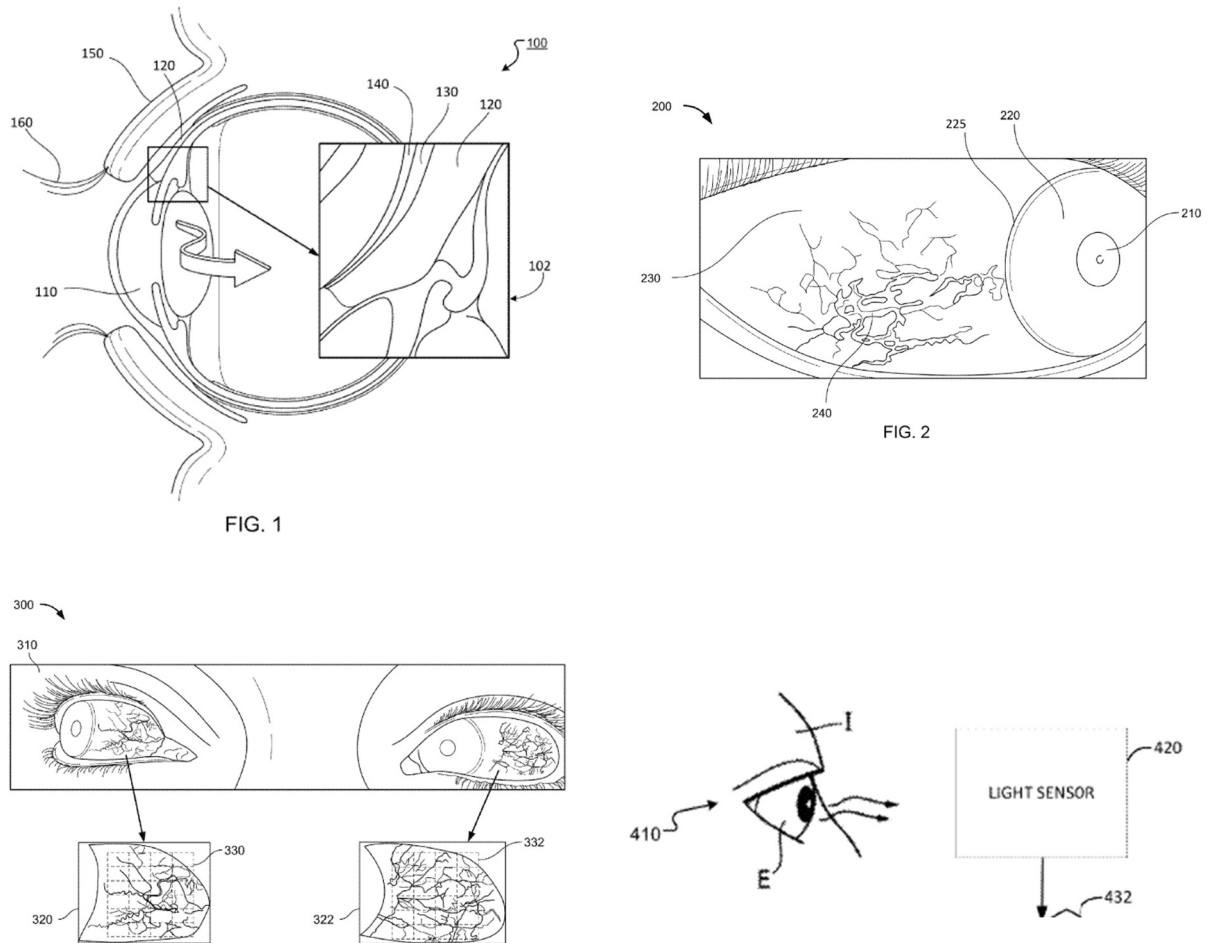


FIG. 2

Indeed, Derakhshani’s disclosure is silent as to capturing images of the user’s face or head, and it does not suggest that it could be adapted to do so. Pet.,

17, 28. Petitioner incorrectly asserts that faces are imaged in Derakhshani (*see, e.g.,* Pet., 17, 24); they are not. Turk, ¶¶359-361; Ex. 1005, Figs. 1-4 (depicting only eyes):



Accordingly, Derakhshani's sensor needs to be placed adjacent to the user's eye. Ex. 1005, 13:35-40 (placing sensor 6-12cm from the eye). This focus effectively excludes capturing a user's face, head, or three-dimensionality, as claimed in the Challenged Patent. Ex. 1001, [1pre], [1d1]-[1d6]; Turk, ¶¶362-363.

In Petitioner’s exemplary images (Ex. 1022), the closest distance provided is 20 cm—2-3x farther away than Derakhshani envisions.



At this distance, a sensor would not have been able to simultaneously capture the vasculature of an eye *and* a face with enough precision to determine three-dimensionality or authentication. Turk, ¶¶364-365.

Trying to use Derakhshani’s sensors to capture a face as proposed by Petitioner, or modifying them to do so, would prevent them from being used for their original purpose (*i.e.*, capturing the vasculature of the eye). *Id.*

Derakhshani accordingly does not disclose or suggest determining a user’s three-dimensionality by comparing first and second data, as required by elements [1pre], 1[d5], 10[pre], 10[f], 22[pre], and 22[d]. Turk, ¶¶366-367. Any capture of part of a user’s face (other than the eye) is incidental, only helps to determine distance, and must give way to the primary purpose of capturing the eye’s vascularity.

Derakhshani also cannot disclose or suggest any claims requiring a user’s “face;” including claim 9 (the “first image” or “second image” are “of the user’s

face”), claim 14 (placing a “face of the user” into an oval during capture, claim 18 (detecting a “reflection of [] illumination from a face of the user”), claim 19 (a “face of the user is held steady”), or claim 24 (a “user’s head is the user’s face”). The images in Derakhshani are of the eyes, and Derakhshani does not teach capturing the face along with the vasculature of the user’s eye. Turk, ¶368.

Derakhshani images eyes and does not suggest capturing the user’s face or “head” as required by claim 22, as well as claim 3 (“features on a side of a user’s head”), claim 9 (“head...[is] held steady”), claim 23 (“aspects of the user’s head from the first image”), claim 24 (“user’s head is the user’s face”). Turk, ¶¶369-370.

3. Tanii Fails to Make Up for Derakhshani’s Deficiencies

The Board noted that Petitioner “relies on Tanii for its teaching of evaluating distance induced distortions in a face caused by the camera’s lens and the distance from the object.” Paper 17, 17-18. Even under the Board’s interpretation, Tanii fails to cure Derakhshani’s deficiencies.⁴ Turk, ¶¶371-372.

Derakhshani does not identify a face, determine three-dimensionality, or evaluate the expected distortions of a live, three-dimensional face from different perspectives. *See supra* §IV.A. Tanii likewise fails to perform any such analysis that would detect a user’s face, three-dimensionality, or expected distortion

⁴ Tanii also fails as a combination under §103, *infra* §V.C.

patterns. Turk, ¶200. Rather, Tanii merely detects the size of an “object” in the frame and a “distance” to the object such that it can aesthetically correct images captured at close range by enlarging peripheral regions relative to center. *See, e.g.*, Ex. 1007, ¶¶[0056], [0072]-[0079], [0097]-[0098] (size); [0096]-[0098], [0100]-[0102] (distance); Turk, ¶¶371-372. Because Tanii merely corrects warping to present a more “natural” image, it would operate the same way whether a face or non-face was presented.

Similarly, Tanii does not measure, assess, or undo *actual* three-dimensional distortion. At best, Tanii corrects two-dimensional warp without evaluating the three-dimensional geometry of a human face and its expected distortion at different perspectives. Turk, ¶373. Thus, even if Tanii were considered solely for its purported teaching of “evaluating” distance-induced distortion, it does not teach or suggest determining liveness or three-dimensionality.

Additionally, Petitioner suggests that images taken different distances from the sensor have different distortion (Pet., 14), but this is not a motivation to combine. The inventor of the Challenged Patent already recognized that distortion effects are “more pronounced” the closer a face is to a lens. Ex. 1001, 28:53-29:20. This observation does not provide a reason to combine Tanii’s distortion correction with Derakhshani’s eye-vasculature authentication. Turk, ¶374;

Medtronic, Inc. v. Teleflex Innovations S.a.r.l., 69 F.4th 1341, 1349 (Fed. Cir. 2023) (“*Medtronic*”).

4. Petitioner Has Separately Failed to Show that Dependent Claims Are Obvious

a. Claims Reciting Ears/Features (Claims 3 and 12)

Claims 3 and 12 require verifying the presence of one or more features or ears on the side of a user’s head in a first image and verifying the absence or reduced visibility of those feature(s) or ears in a second image, respectively. These limitations are neither taught nor suggested by Derakhshani or Tanii, and a POSITA would not have been motivated to incorporate such functionality.

While Derakhshani’s eye images might inadvertently include a portion of an ear or feature (*see, e.g.*, Ex. 1005, 16:51-17:2), there is no *verifying* the presence, absence, or reduced visibility of ears or features. Turk, ¶¶378-379. Derakhshani’s use of image landmarks for determining a spatial metric undercuts the idea of an ear being absent or having reduced visibility; image landmarks need to be visible for the spatial metric determination to take place. *Id.*; Ex. 1005, 16:51-17:2.

Petitioner asserts that an ear would be blurry (having “reduced visibility”) if it were outside of the focal plane in Derakhshani. Pet. 34. But a blurry ear would not allow for calculation of spatial metrics. Regardless, using image landmarks to focus does not teach *verifying* presence, reduced visibility, or absence of any ear. Turk, ¶380.

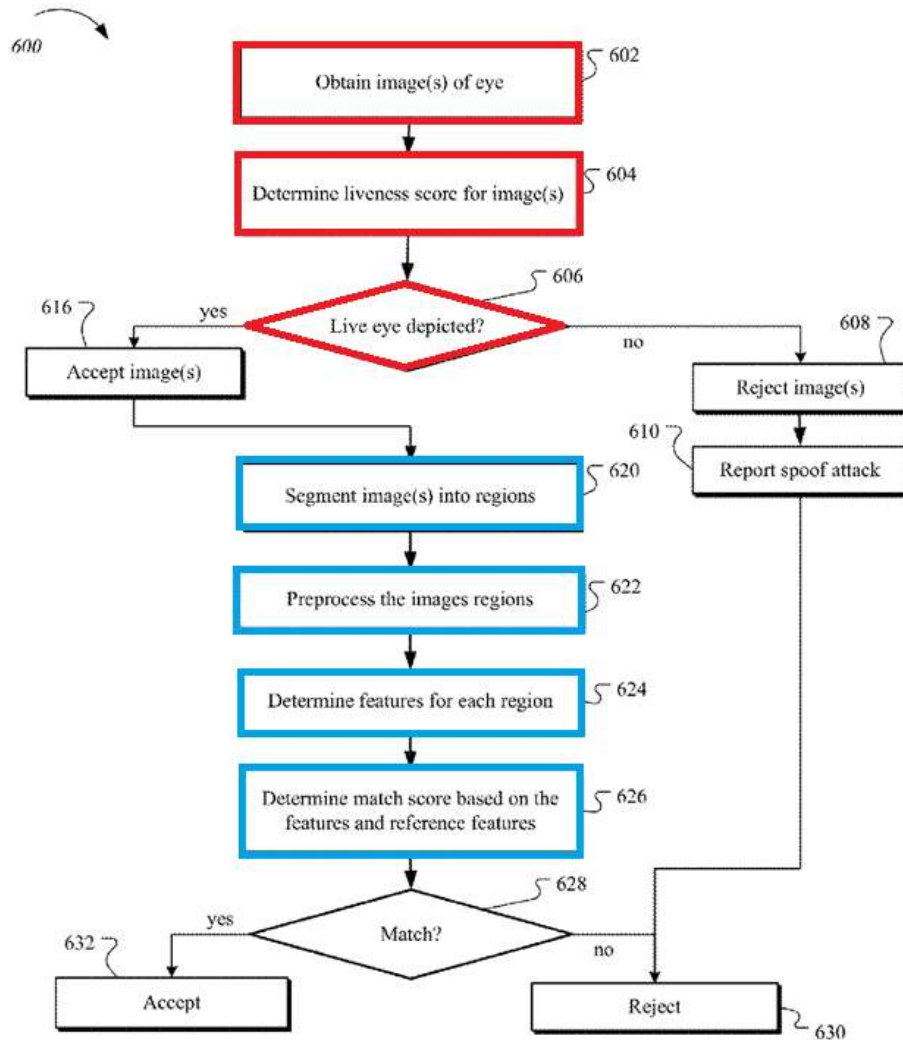
Finally, Petitioner contends Tanii teaches that “the absence or presence of an ear is a natural result of changing the distance between the user and camera.” Pet., 34-35. This is irrelevant because, again, Tanii does not suggest *verifying* presence, reduced visibility, or absence of ears or features. . Turk, ¶381.

b. “Comparing” First Data to Enrollment Image (Claim 5)

For claim 5, Petitioner confuses biometric features and image landmarks.

Petitioner initially asserts Derakhshani’s image “landmarks” are the claimed first/second data (1[d2], 1[d4]). Pet., 23, 26. Derakhshani’s *image* landmarks are objects used to estimate depth and spatial metrics. Ex. 1005, 16:51-54; Turk, ¶382-384.

Claim 5 requires matching enrollment data to the first/second data. Ex. 1001, 46:55-57. Petitioner maps first/second data to vasculature “features” used to match a user to enrollment data. Pet., 37-38; Ex. 1005, 13:9-61. Image landmarks are *not* vasculature features. *See* Ex. 1005, Fig. 6:



Eye liveness detection uses image landmarks to determine a spatial metric.

Id., 3:13-14, 10:25-11:16; 16:44-17:11; 17:45-64. Authentication, in contrast, extracts biometric features from the eye vasculature (step 624) and matches these features against a reference record (step 626) for authentication (steps 628-632).

Id., 4:19-24, 7:20-23, 9:18-26, 12:23-24, 13:9-14, 13:62-66, 14:25-58.

Petitioner's inconsistent reliance on image landmarks to satisfy claim 1's "first data" and on biometric features to satisfy claim 5's "first data" is fatal to its

position. Turk, ¶¶385-391. “Landmarks” and “features” are not synonymous (*contra* Paper 17, 49-50); *supra* §IV.A.

**c. Claims Requiring “First Data” and “Second Data”
Comprise Biometric Data (7, 16) or Facial Features
(8, 17)**

Claims 7 and 16 require that “the first data and the second data comprise biometric data.” Petitioner incorrectly attempts to correlate the required biometric data to Derakhshani’s *image* landmarks. *Supra* §I.A.4.b; Turk, ¶¶392-394.

Image landmarks are also not a “mapping” or “map of facial features” as required by claims 8 and 17 (respectively). Derakhshani’s images are 6-12cm away and cannot capture images of faces. *Supra* §V.A.2. A mapping of image landmarks at such a close range cannot be a “mapping” or “map” of *facial* features (requiring an image of the user’s face). Ex 1001, 7:31-38; Turk ¶¶395-398.

**B. Grounds 2A-2C: The Proposed Zhang Combination Fails to Show
All of the Claimed Elements**

**1. Zhang Does Not Determine Expected Differences Based on
Movement of Camera or User**

Zhang does not compare authenticating data from two images to determine whether they exhibit expected differences consistent with the shape of a face when the camera or user moves, as the claims require. Turk, ¶¶401-402; *see* Ex. 1001, 1[d5], 10[f], 22[d]. The claimed comparison relates to authenticating the three-dimensionality and liveness of the user and relies on expected differences when the

camera or user moves. Ex. 1001, 1[d6], 10[g], 22[e]. Zhang does not teach or suggest any such expected differences, and the Petition has not shown that it does. Pet., 65.

Zhang does not determine whether images exhibit expected differences consistent with the known effects of perspective distortion on a three-dimensional face. *Id.* Zhang matches feature points across two images and compares pixel-level intensity differences around those points in a warped first image and a second image. Ex. 1006, ¶¶[0030]-[0034]. The comparison is based on whether the color or intensity difference exceeds a threshold. *Id.* (“If the difference between the second image and the warped image is larger (e.g., at least a threshold value), then the first and second images include a face that is a live face.”). But determining pixel regions of two images differing by color/intensity does not teach the requirement in 1[d5]-[d6], 10[f]-[g], or 22[d]-[e] to determine “expected differences,” because determining pixel differences alone does not evaluate whether observed differences are consistent with what would be expected from a *change in distance* (i.e., distortion due to perspective, parallax, or other depth-related effects). See Ex. 1001, 38:24-30; Turk, ¶¶403-404. Indeed, Zhang’s method does not relate to expected distortion or how a user should look at different distances. Zhang makes no such predictions. *Id.*

2. Petitioner Inconsistently Treats the Claimed “First Data” as Both Feature Points and Facial Feature Locations

Claims 1 and 10 require processing images to create and then compare first and second data. Ex. 1001, 46:4-5, 46:14-19, 47:9-10, 47:20-25. Like with its position on Derakhshani, Petitioner and its expert confused “feature point” with “feature location.” This ground must fail as well. Turk ¶405.

As discussed above, **feature points** are used to generate a matrix H while **selected locations** (or “**facial-feature locations**” as Petitioner calls them) are used to compare images *using* matrix H . Ex. 1006, ¶¶[0026]-[0034], claim 3, Fig. 3; Turk ¶¶406-407.

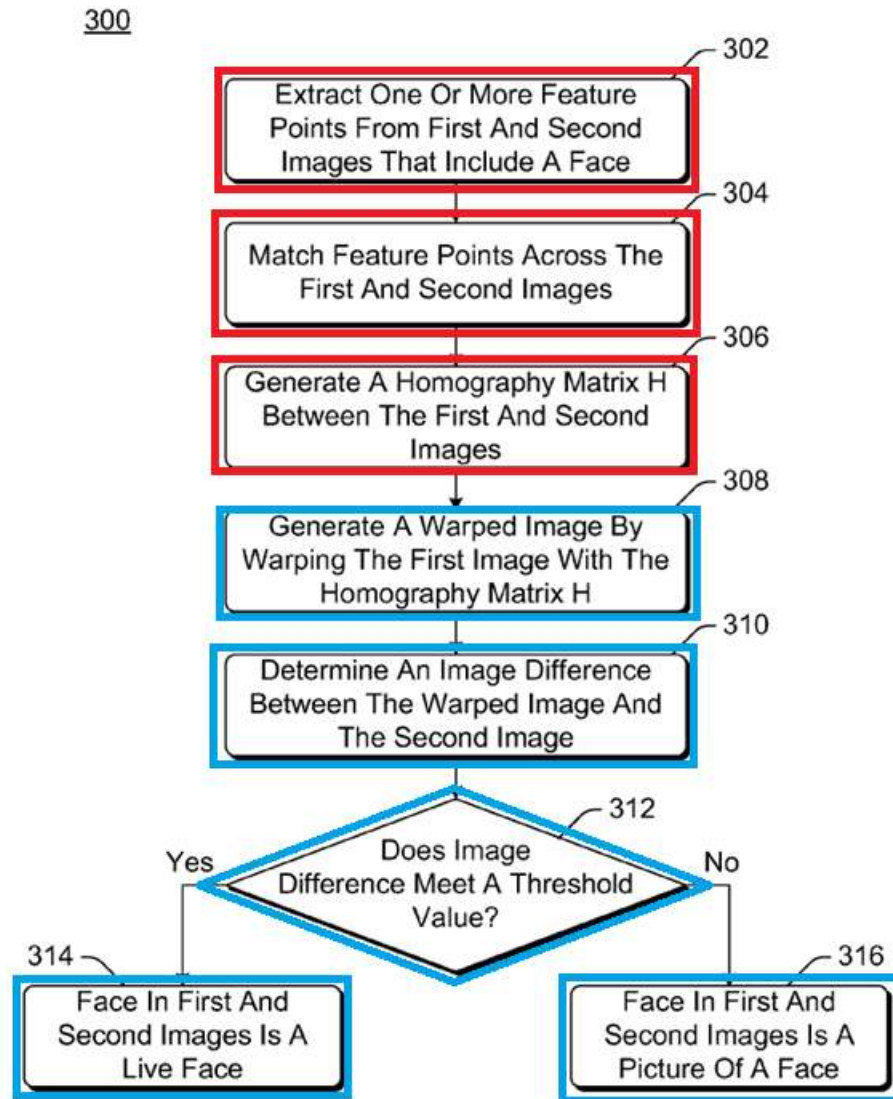


Fig. 3

For the “processing” steps, Petitioner maps Zhang’s “*feature points*” from a first image and a second image to “first data” and “second data,” respectively. Pet., 60 (“Zhang discloses *processing the first image* to extract ‘*feature points*’...[a] POSITA would have understood these *extracted feature points* to be

data....”), 63; Ex. 1003, ¶¶1040-42, 1049-50. Petitioner admits that “*feature points*” are specific markers in individual images: “a corner of an eye, a corner of a mouth, [or] a tip of a nose.” Pet., 60-61. They may be as small as a single pixel. Ex. 1006, ¶[0027].

But when mapping “first data” in the “comparing” element (1[d5]) Petitioner abandons its earlier position, asserting instead that “first data” is “*selected locations*”—what it refers to without *any* textual support as “*facial-feature locations*”—in a warped first image. Pet., 64 (referring to comparison between “*selected locations*”). Unlike “*feature points*” which are specific markers in individual images, “*selected locations*” are locations that are compared across *both* the warped and second images. Ex. 1006, ¶[0032]; Turk ¶408.

Regardless of whether Petitioner believes “*feature points*” from a first image *or* “*selected locations*” across the warped and second image constitute the “first data” in 1[d5], the two are not equivalent to one another and Petitioner’s position treating them identically is fatal.⁵ Turk ¶409.

⁵ Petitioner’s citations to different portions of Zhang for “first data” in 1[d2] and 1[d5] is further evidence that “*feature points*” and “*selected locations*” are not synonymous. Compare Pet., 60-61 (“*feature points*” in ¶[0027] for 1[d2]’s “first

3. Zhang in View of Tanii Fails to Teach the Independent Claims

Tanii fails to make up for Zhang’s deficiencies, including its silence regarding expected distortions and differences. The Board acknowledged that Petitioner relies on Tanii to teach “evaluating distance induced distortions in a face caused by the camera’s lens and the distance from the object.” Paper 17, 18. But this overstates Tanii’s actual teaching.

Tanii does not evaluate distortion in any analytical or biometric sense. Paper 17, 18. Tanii merely assumes distortion is present and detects the size of an “object” in the frame and a “distance” to the object. *See supra* §V.A.3. It then simply corrects warp based on the object’s size and distance from the camera to make the image more natural for a viewer. *Id.*, ¶[0056]. Tanii would operate the same way whether a face or a non-face was presented. Its uniform teaching of peripheral enlargement fails to make up for the deficiencies in Zhang. Turk, ¶¶410-411.

Similarly, as above, Tanii does not measure, assess, or undo *actual* three-dimensional distortion and accordingly cannot supply the missing limitations,

data”), *with* 63-64 (“[selected locations](#)”/“[facial-feature locations](#)” in ¶¶[0031]-[0032] for 1[d5]’s “first data”).

analyzing expected differences and distortions or determining three-dimensionality. *See supra* §V.A.3.

4. Petitioner Has Separately Failed to Show that Certain Dependent Claims Are Obvious

a. Claims Reciting Ears/Features (Claims 3 and 12)

As discussed above with respect to §I.A.4.a, the claims require the existence and absence or reduced visibility of a user's ears/features in different images. Petitioner agrees that Zhang fails to teach this. Pet., 70. Petitioner makes a similar case as it did with Derakhshani. *Compare id.*, 34-36 with 70-72. These arguments fail for the same reasons discussed above in §I.A.4.a.

b. Zhang Does Not Capture “Biometric Data” as Required by Claim 7 and 16

Claims 7 and 16 explicitly require “biometric data.” Petitioner points to Zhang's “feature points” as satisfying this limitation. Pet., 60-61, 74. But these feature points may be as small as a single pixel and even those pixels at “a corner of an eye, a corner of a mouth, [or] a tip of a nose” are not used for authentication or matched against stored biometrics. Ex. 1006, ¶¶[0026]-[0027]. They are used to generate matrix H and cannot be “biometric data.” *Id.*, ¶¶[0030]-[0034].

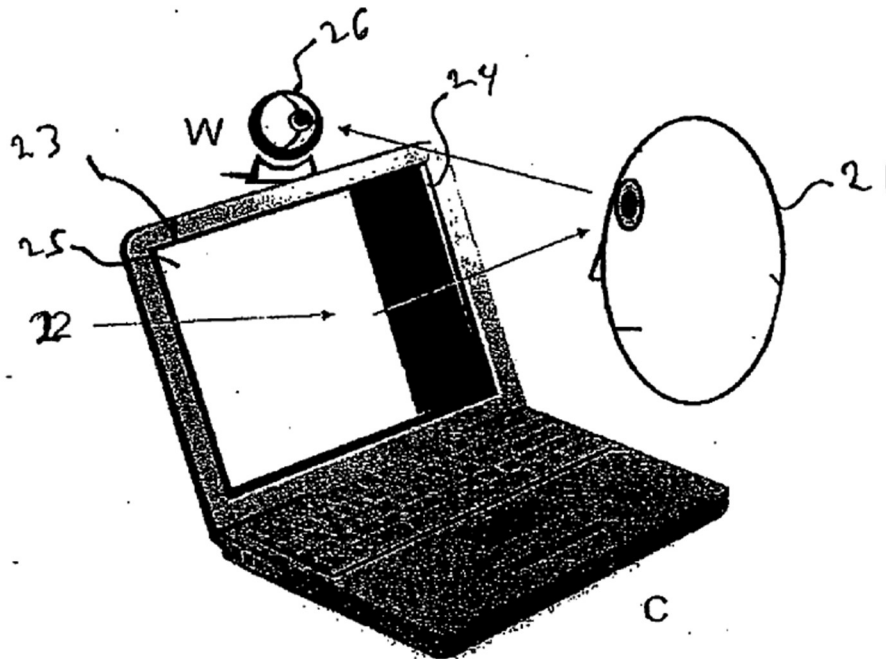
The Board found Zhang's process “looks for distortions in a homography transform.” Paper 17, 23. At best, this describes a geometric comparison, not a facial liveness detection or a biometric authentication. Turk, ¶¶416-418.

Accordingly, Zhang cannot satisfy the biometric data requirements of claims 7 and 16.

c. Reflections from Illuminations of Face (Claim 18)

Claim 18 requires detecting a reflection “from a face of the user.” Ex. 1001, 48:10-13. Petitioner concedes Zhang does not teach this limitation, relying only on Hoyos. This argument fails.

Hoyos determines whether reflections were formed by a “curved surface *consistent with a human eye*.” Ex. 1010, ¶[0019], Fig. 2:



Detecting reflections from an eye is not comparable to detecting a reflection from a face. Turk, ¶¶419-420 (explaining eyes are highly reflective surfaces, materially different from skin, which acts as a diffuse reflector). Because Hoyos does not

“detect a reflection of [any] displayed image off of the user’s *face*,” Hoyos fails to teach claim 18. Turk, ¶¶421-422. Petitioner critically does nothing to relate the unique reflective properties of the eye to those of a face. *Id.*

C. Tanii Cannot Cure the Deficiencies of the Other References

Tanii performs aesthetic image correction—full stop. It does not evaluate distortions.

Tanii is also not analogous to the ’910 patent. It works to remove distortion, which Derakhshani and Zhang use to operate. Petitioner’s proposed combinations would require significant distortions of Derakhshani and Zhang. And those in the field of biometric security—unlike Dr. Daft—would have had no reason to look to Tanii, which focuses on making images visually pleasing. Turk, ¶423.

1. Tanii Is Not Analogous Art

A prior art reference that is not reasonably pertinent to a patent’s particular problem or from the same field of endeavor is not analogous to the challenged patent. *Sanofi-Aventis Deutschland GmbH v. Mylan Pharms.*, 66 F.4th 1373, 1377 (Fed. Cir. 2023). Tanii fails to satisfy either condition.

a. Tanii Is Not from the “Same Field of Endeavor”

Petitioner asserted for the first time in its pre-institution Reply that Tanii is analogous *not* because it is from the same field of endeavor, but because it and the ’910 patent are both “concerned with identifying and *accounting* for distortions

of [3D] faces in images captured using a camera.” Reply, 5. But this oversimplifies the ’910 patent and neglects the patent’s use of the distortions that Tanii removes.

As Dr. Turk explains, using similar items for materially different purposes does not place two references in the same field of endeavor. Turk, ¶¶424-428 (analogizing color stripping and color segmentation to processing of dairy cows and beef cows). This is because a prior art reference, which destroys necessary information for the patent to operate, cannot be part of the same field of endeavor. To hold otherwise invites hindsight analysis. *See Medtronic I*, 69 F.4th at 1349-50.

b. Tanii’s Distortion Correction Shows that It Is Not “Reasonably Pertinent” to the Problems Faced in the ’910 Patent

A prior art reference is only “reasonably pertinent” to a particular problem if “[it] logically would have commended itself to an inventor’s attention in considering his problem.” *In re Clay*, 966 F.2d 656, 659 (Fed. Cir. 1992). This pertinence is determined with respect to the *claimed* invention, not the patent’s general disclosure. *Id.*

As Petitioner admits, the ’910 patent claims a system to “distinguish a three-dimensional face from a two-dimensional picture of a face,” and prevent an imposter from spoofing the system. Pet., 4. The ’910 patent prevents spoofing by

“looking for” perspective distortion due to the distance between a three-dimensional face and a camera. Pet., 4; *see also* Ex. 1001, 29:51-67, 30:47-31:23.

Tanii, on the other hand, has nothing to do with this spoofing problem. Tanii does not even detect distortions. It assumes and corrects distortion by enlarging the peripheral areas of an image, regardless of whether the image is of a distorted face. Turk, ¶¶429-432.

The Board’s suggestion that Tanii is a “relevant teaching” because “a three-dimensional face exhibits distortions when a cellular phone camera and a face are close together during image capture” (Paper 17, 26) ignores that this alleged teaching would not be helpful to the ’910 patent. The inventor had already recognized this as a problem. Ex. 1001, 28:53-29:20.

The only teaching in Tanii relevant to distortion is removing it. Pet., 11-13. That is contrary to the claimed technology. Even if Tanii was only relied upon for “evaluating distance induced distortions” (Paper 17, 18), evaluating distortions alone does not prevent spoofing. Turk, ¶¶433-434. Indeed, Petitioner’s chosen “critical feature” (correcting image distortion; Ex. 1003, ¶113) would prevent each reference from operating as taught by the ’910 patent. Thus, a POSITA would not have reasonably expected to solve the ’910 patent’s spoofing problem using Tanii and would not have looked to Tanii for any teaching to do so.

Tanii also fails to have the “same purpose as the *claimed* invention.” *Clay*, 966 F.2d at 659. Tanii’s purpose is to correct image distortion, while the claimed invention *uses* image distortion to determine three-dimensionality. *See, e.g.*, Ex. 1001, 46:16-25 (comparing expected differences and distortions). Tanii’s competing purpose would have further prevented a POSITA from considering it. *Turk*, ¶435; *Clay*, 966 F.2d at 659.

2. There Would Have Been No Motivation To Combine Either Reference with Tanii

Even if Tanii were analogous art here—it is not—there would have been no motivation to combine it with Derakhshani or Zhang. *Turk*, ¶¶436-437. Either combination would destroy the basic objective of the respective primary reference, rendering it inoperable for its intended purpose. *See Medtronic I*, 69 F.4th at 1349-50 (“destruction of [reference’s] ‘entire premise’ ‘counsel[ed] strongly against’ obviousness”) (internal citation omitted); *Trivascular, Inc. v. Samuels*, 812 F.3d 1056, 1068-69 (Fed. Cir. 2016) (affirming finding of no motivation to replace barbs in a primary reference when modification “would destroy the basic objective of the barbs”); *In re Gordon*, 733 F.2d 900, 902 (Fed. Cir. 1984).

Petitioner admits that Derakhshani and Zhang require distortions to operate. Derakhshani allegedly determines whether a face is three-dimensional using distortions—“different amounts of blur” or “parallax”—across multiple images.

Pet., 7-8; Ex. 1003, ¶¶182, 400, 885. And Zhang allegedly generates a “warped” first image of a face, matching it to a second image to determine whether the face is real. Pet., 50-52.

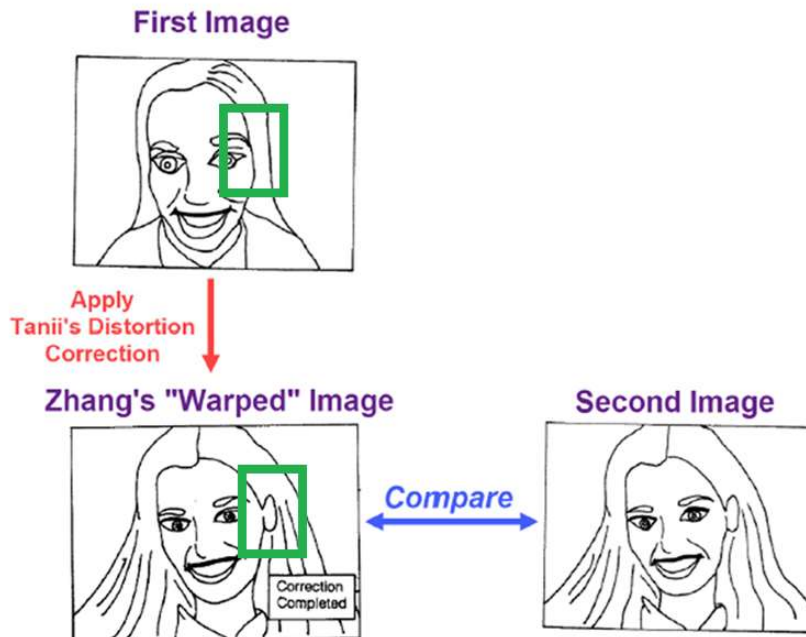
Contrary to the findings in the Decision, Tanii does not teach “evaluating distance induced distortions in a face.” Paper 17, 18. Indeed, it does not identify any distance-induced ; its teachings relate to correcting images by removing the distortion Derakhshani and Zhang allegedly use. Turk, ¶¶436-439; *see* Ex. 1003, ¶113 (Petitioner asserting Tanii’s “critical feature” is to provide a “procedure to correct ... distance-induced *distortion* ... to produce an *undistorted image*,” for a viewer); *id.*, ¶¶110-112; Pet. 12-13. And Tanii’s teaching is further limited because it does not determine whether an image requires correction (Ex. 1007, ¶[0058]); it merely assumes it does. Turk, ¶¶439-443.

Correcting distortion on images captured by Derakhshani and Zhang would prevent detection of three-dimensionality, destroying the principle of operation of those references. Thus, there would have been no motivation to combine Derakhshani or Zhang with Tanii.

Moreover, with respect to Derakhshani specifically, the references’ incompatibility is further recognized by the differing imaging requirements. Derakhshani captures images of the eye from 6-12cm (Ex. 1005, 13:35-40), which necessarily eliminates capturing the user’s full face/head or performing a three-

dimensionality evaluation. In contrast, Tanii's correction method is designed for images captured at arm's length using wide-angle lenses (Ex. 1007, ¶[0047]), making it incompatible with Derakhshani's eye-only imaging. *Medtronic I*, 69 F.4th at 1349.

With respect to Zhang, a POSITA would not be motivated to "warp" the "close" image using Tanii's distortion-correction procedure and then compare it to the "far" image to evaluate differences, as Petitioner asserts. Pet., 54-55; Paper 17, 23. Indeed, Petitioner's example creates features out of thin air during distortion correction in an attempt to compare it to a second photo.



Pet., 55. Tanii’s purported distortion correction would not create ears in warped image that could not be seen in a first image. Thus, Petitioner relies on a modification that is neither taught nor suggested. Turk, ¶73, 444-450.

Further, regarding Zhang, Petitioner incorrectly contends that a POSITA could compare two images (one “close”, one “far”) directly to determine whether they exhibit expected distortion differences. Pet., 55-56; Paper 17-18, 24. Instead, there would be no way to “eliminat[e] the need to mathematically transform an image” and directly compare two images without performing the same basic calculations. Turk, ¶¶451-452. Petitioner fails to explain how two images could be compared, particularly given one is distorted and merely overlaying the images as Petitioner has done would not yield the alleged result. Petitioner’s expert manufactures an entire set of operations and evaluations that do not appear in either reference. *Id.*

Finally, an actual POSITA in the relevant field (unlike Dr. Daft) would have had no reason to look to Tanii in the first place. Tanii’s teachings relate to correcting image distortion to create a more pleasing picture. Ex. 1007, ¶[0056]. Making visually aesthetic images is irrelevant to the problems faced in the biometric security field, and Dr. Daft’s spurious reasoning—that it allegedly teaches evaluating distortions—falls flat because Tanii does not teach evaluating distortions at all. Turk, ¶¶453-454. Even if Tanii “evaluat[es]” distance-induced

distortions, that concept would not provide a reason for POSITA to use that reference to teach the claims. Including the concept of evaluating distortions would still leave significant gaps in the claims. *Supra* §§V.A.3, V.B.3; *Trivascular*, 812 F. 3d at 1069 (finding insufficient motivation to combine in part because it would not satisfy key limitations of the claims).

VI. Petitioner Failed to Name All Real Parties in Interest Under 35 U.S.C. §312(a)(2)

Post-institution evidence further demonstrates that iProov is an unnamed real party in interest (“RPI”). In particular, the newly-produced iProov/Jumio partner agreement establishes that iProov is an RPI. And Jumio’s declarant, Jessica Kaiser, was unwilling or unable to provide details regarding the investigation that resulted in her declaration (Ex. 1049), so her declaration should be accorded no weight.

Congress permits the Board to consider an IPR petition “only if . . . the petition identifies all real parties in interest.” 35 U.S.C. §312(a)(2). As explained in detail below, iProov is an unnamed real party in interest (“RPI”) (*see* Pet., 86), so this Petition is defective and the Board cannot consider it.

The Board initially declined to evaluate whether iProov is an RPI, relying on the then-precedential *SharkNinja Operating LLC et al. v. iRobot Corp.*, IPR2020-00734, Paper 11, 18-19 (PTAB Oct. 6, 2020). *See* Paper 17, 2-3. But *SharkNinja*

is no longer precedential. As the Office explained, “disclosure of RPIs serves purposes other than time-bar and estoppel issues.” *PTAB De-Designates a Decision*, <https://www.uspto.gov/subscription-center/2025/ptab-de-designates-decision>, last visited Oct. 15, 2025. Jumio’s lead counsel confirmed that de-designating *SharkNinja* “is going to reopen everything again” regarding RPIs. Ex. 2089, 2. As it should. Analyzing whether an unnamed party is an RPI helps the Board assess whether it may properly consider a petition under controlling statutes, and it also allows the Board to analyze whether its judges have any conflicts of interest in relation to that party. *See Consolidated Trial Practice Guide (“CTPG”)*, 12.

In addition, two of the four IPR petitions Jumio filed (IPR2025-00106 and IPR2025-00107) are time-barred under 35 U.S.C. §315(b). The Board must assess whether iProov is an RPI in those cases even under the old *SharkNinja* rationale. And because the facts are identical, it should apply the same RPI conclusion here and find that Jumio did not comply with 35 U.S.C. §312(a)(2).⁶ To do otherwise would apply inconsistent results to the same facts and same parties, which would

⁶ The Board thought FaceTec may have suggested that the Board should extend the §315(b) time bar to related patents. Paper 17, 3. However, FaceTec makes no such request.

permit the non-time-barred petitions to be considered despite not meeting the basic statutory requirements for doing so.

A. iProov and Jumio Have Close Business and Legal Relationships, and iProov [REDACTED]

FaceTec sued iProov in Nevada for infringement of related U.S. Patent No. 10,776,471 (at issue in IPR2025-00106), largely due to Petitioner Jumio's use of iProov's infringing software. Ex. 2024. FaceTec then amended its complaint to assert related U.S. Patent No. 11,157,606, which is now at issue in IPR2025-00107. Instead of approaching the PTAB, iProov chose to litigate invalidity before the district court. It served non-public invalidity contentions that included the primary references currently before the Board, including Zhang and a related patent having the same disclosure as the Derakhshani reference here. Ex. 2003, 14, 17-18; Ex. 2004; Ex. 2005, 1-2. Thus, over two years before this Petition was filed, iProov began litigating invalidity against related patents based on the same primary references presented here.

By that time, iProov had established close business and legal relationships with Petitioner Jumio—relationships that continue to this day. In 2020, iProov and Jumio entered an agreement where, according to a declaration from iProov's counsel, "iProov [maintains and] provides its Liveness Detection Software to Jumio for use in Jumio's own products [by] provid[ing] binary files to Jumio, who

then embeds iProov technology into its products.” Ex. 2006, 23 (*see* Dkt. 47-1, ¶8). The resulting relationship goes well beyond a typical arms-length customer/supplier relationship. Both iProov and Jumio publicly tout their relationship as “partners,” and Jumio’s Chief Revenue Officer went as far as to describe Jumio and iProov as “working together” as “kind of one team.” Ex. 2001, 2-3.

The iProov/Jumio agreement also contains indemnification provisions that require [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] *Id.*, 16 (¶13.2).

In related litigation, iProov confirmed to the court that the conditions triggering its indemnity obligations have been satisfied, stating that “iProov does have an indemnification obligation.” Ex. 2006, 1, 23 (*see* Dkt. 47-1, ¶7). And the court not only confirmed this obligation but found that iProov “has indemnified Jumio.” Ex. 2010, 4.

Because FaceTec's infringement allegations implicated Jumio's products, FaceTec subpoenaed Jumio. Jumio agreed to provide discovery regarding liveness verifications it performed using iProov's technology. Ex. 2007. Unsurprisingly, Jumio was represented by the same counsel (Ryan Hatch and Alan Sege) who represented iProov. *Compare* Ex. 2007, *with* Ex. 2002, 2-4.

FaceTec later sued Jumio in California on the related '471 and '606 patents, as well as the Challenged Patent, based in part on Jumio's use of iProov's technology. Ex. 2008, 5 (*see* Dkt. 1). iProov moved to intervene so it could defend itself and Jumio, explaining that the outcome "will affect iProov because FaceTec's allegations are so intimately tied to iProov's liveness detection technology. Any decision concerning whether Jumio infringes the Patents-in-Suit would necessarily include a determination of whether iProov's liveness detection technology infringes." Ex. 2009, 11-12. iProov also explained how its knowledge regarding infringement was superior to Jumio's, stating that "iProov would bring deep expertise concerning the operation of its liveness detection technology, which would be crucial to determining whether the technology infringes the Patents-in-Suit. Indeed, iProov is better situated than Jumio to make such arguments as Jumio embeds the iProov technology into its own applications." *Id.*, 14.

iProov also explained how Jumio's and iProov's interests are aligned regarding invalidity, stating that "[t]here are common issues of law and fact

between iProov's and Jumio's defenses – namely, the noninfringement and **invalidity of the asserted patents.**" Ex. 2009, 6; *see also id.*, 16 (iProov stating that common questions of law and fact include invalidity).

In seeking to intervene in FaceTec's California action against Jumio, iProov demanded full-party status specifically *so it could defend Jumio*, stating that "iProov must not be hamstrung in its efforts to defend its customer from FaceTec's claims of infringement." Ex. 2006, 7; *see also id.*, 9 (iProov stating it has interests in "defending its customer"), 10 (iProov stating it has "a significant protectable interest in defending its customers").

The court permitted iProov to intervene, finding that "iProov has an economic interest in the litigation because it **has indemnified Jumio.**" Ex. 2010, 4. It also found that "[a] finding of infringement based on accused technology owned by iProov would effectively be a finding of infringement by iProov." *Id.* The court also found that Jumio had its own interests in the litigation, including defending its own non-iProov-created liveness technology. *Id.*, 5. It permitted iProov to intervene to account for these limited divergent interests. *Id.*

After iProov intervened, it has again pursued invalidity of the '471 and '606 patents, in addition to the Challenged Patent, and it has done so in collaboration with Jumio. For example, the court granted an extension of time due to "the need for iProov to coordinate finalizing invalidity contentions with Jumio, in light of the

holidays.” Ex. 2008, 12-13 (*see* Dkt. 74). Jumio’s declarant, Jessica Kaiser, also admits that “communications between Petitioner and iProov relating to [the California] invalidity contentions occurred” between the filing of this Petition and when the Board granted institution, with iProov and Jumio filing their contentions nearly five months before institution. Ex. 1049, ¶6; Ex. 2011; Ex. 2012.

iProov’s and Jumio’s contentions both have continued to rely on the references iProov identified in its 2022 invalidity contentions (Derakhshani and Zhang), as well as other references relied on in this Petition. Ex. 2011, 15 (Zhang), 127 (Tanii), 128 (Derakhshani), 133 (Hoyos); Ex. 2012, 18 (Jumio relying on Derakhshani, Zhang, Tanii, Hoyos, and Tahk). Thus, iProov is litigating invalidity of the related ’471 and ’606 patents in Nevada and, in coordination with Jumio, is litigating invalidity of those patents plus the Challenged Patent in California.

**B. iProov Is a Real Party in Interest Because It Has [REDACTED]
[REDACTED] and Otherwise Has Sufficiently Close
Business and Legal Relationships with Jumio**

To determine RPI status, the Federal Circuit applies the following non-exhaustive factors: (1) whether a nonparty “desires review of the patent”; (2) “whether a petition has been filed at a nonparty’s ‘behest’”; (3) “who, from a ‘practical and equitable’ standpoint, will benefit from the redress that the chosen tribunal might provide”; (4) “the extent to which [the nonparty] has an interest in

and will benefit from [the petitioner's] actions"; and (5) whether the petitioner "can be said to be representing that interest after examining its relationship with" the nonparty. *Applications in Internet Time, LLC v. RPX Corp.*, 897 F.3d 1336, 1349-1353 (Fed. Cir. 2018) ("*AIT*"). The inquiry "demands a flexible approach that takes into account both equitable and practical considerations, with an eye toward determining whether the non-party is a clear beneficiary that has a preexisting, established relationship with the petitioner." *Id.* at 1351.

As Petitioner, Jumio "bears the ultimate burden of persuasion to show that" iProov is not an RPI. *Worlds Inc. v. Bungie, Inc.*, 903 F.3d 1237, 1242 (Fed. Cir. 2018). If Jumio cannot prove by a preponderance of the evidence that iProov is *not* an RPI, the Board must find this Petition defective under 35 U.S.C. §312(a)(2).

Relevant to each *AIT* factor, as the Board recognized during institution, "an indemnification agreement can, in some instances, support a finding that an indemnitor is a real party in interest." IPR2025-00106, Paper 17, 20. Here, the iProov/Jumio agreement does so because it demonstrates that iProov (1) [REDACTED] [REDACTED] and intervened in the California action to defend Jumio, and (2) [REDACTED] with the district court finding that iProov has in fact indemnified Jumio.

While the ability to control a proceeding is not essential to demonstrate that a non-party is an RPI (*see* CTPG, 17), when actual or potential control are present,

they support an RPI finding. *AIT*, 897 F.3d at 1342-43. The iProov/Jumio indemnification clauses require Jumio to [REDACTED]

[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]
[REDACTED]

iProov further confirmed that it intervened in the California action specifically “to defend its customer [Jumio] from FaceTec’s claims of infringement.” Ex. 2006, 7; *see also id.*, 9 (“defending its customer”), 10 (same). Thus, [REDACTED] it is actively doing so.

Regarding funding, the indemnification agreement requires iProov to [REDACTED]
[REDACTED]
[REDACTED]
[REDACTED] Jumio filed these IPRs directly in response to FaceTec’s infringement suit, so they are [REDACTED]
[REDACTED] per

the agreement. Thus, they trigger iProov's obligation to indemnify Jumio [REDACTED]

[REDACTED]

Moreover, the district court found that iProov **"has indemnified Jumio."** Ex. 2010, 4. Jumio contends this is not true, telling FaceTec that no consideration has been or will be exchanged under the agreement in relation to either the litigation or the IPRs. *See* Ex. 1055, 3-6. But Jumio refused to provide any explanation, let alone evidence, for these assertions. *See id.*, 2. Nor has it explained why the court made contrary findings.⁷ Jumio is a party to the district court action and had the *obligation* as officers of the court to correct the record if it believed that iProov was providing false information. It did not do so. Now it seeks to paint an alternate reality, all while refusing to provide supporting evidence.

The only evidence of record demonstrates that the indemnification agreement [REDACTED]

[REDACTED]

⁷ FaceTec asked the Board to compel Jumio to provide an explanation, but the Board invited FaceTec to "raise any inconsistencies between Jumio's/iProov's conduct and their rights/obligations under the indemnification agreement in its substantive briefing...." Paper 35, 3.

Additional evidence further demonstrates that iProof is an RPI under the *AIT* factors. For example:

(2) iProov has an interest in and benefits from the IPRs both regarding its indemnification obligations to Jumio and to its other customers. *See* §VI.A; Ex. 2009, 11. Protecting customers supports an RPI finding. *Ventex Co., Ltd. v. Columbia Sportswear N. Amer., Inc.*, IPR2017-00651, Paper 152, 8-9 (PTAB Jan. 24, 2019) (precedential).⁸

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(3) Jumio “can be said to be representing [iProov’s] interest” because Jumio is challenging the Challenged Patent based on the same primary references iProov is relying on in two district court actions. *See* §VI.A. This is true even if iProov and Jumio never formally agreed that Jumio would do so. *AIT*, 897 F.3d at 1357.

(4) After filing but before institution, iProov coordinated with Jumio regarding invalidity. *See* §VI.A (citing Ex. 1049, ¶6); *Power Integrations, Inc. v. Semiconductor Components Indus., LLC*, 926 F.3d 1306, 1317 (Fed. Cir. 2019) (“privity and RPI relationships arising after filing but before institution” are relevant).

In addition, Jessica Kaiser’s declaration testimony, including her statement that “iProov did not direct, control, or fund the Petitions,” should be given no weight. Ex. 1049, ¶4. The Board preliminarily credited her testimony (IPR2025-00106, Paper 17, 18), but during her deposition, she was unwilling or unable to provide the basis for her statements. This is significant because, while she claims to have testified based on her personal knowledge (Ex. 1049, ¶1), she admitted during her deposition that she needed to conduct an investigation because several statements were not within her personal knowledge. Ex. 2086, 12:9-16, 68:18-19 (“I don’t have any personal knowledge.”). Understanding the scope of her

investigation is therefore critical to understanding what weight her statements should be accorded.

But when asked, “[w]hat did you do to prepare . . . the four declarations that you submitted in the IPRs,” she initially refused to answer based on privilege and work product. Ex. 2086, 10:6-19. While she later answered a subset of questions about the basis for her statements, she largely could not recall the details beyond speaking with two Perkins lawyers. *See, e.g., id.*, 14:18-22, 65:12-66:23, 68:14-69:15, 73:10-23. The Perkins IPR team included at least seven members, but she did not recall speaking with most of them. *See, e.g., id.*, 62:6-63:3, 65:22-66:12; Ex. 2088, ¶7.

For the portions she did recall, she admitted to multiple gaps in her investigation. For example, she admitted that she did not speak with anyone at Jumio, despite sending them drafts of the IPR petitions before filing. Ex. 2086, 13:13-19, 38:10-19. She does not know whether anyone at Jumio shared the drafts with others, such as iProov. *Id.*, 41:6-13. Despite testifying that “iProov did not provide or suggest the prior art in the IPR Petitions to Petitioner,” (Ex. 1049, ¶5), she admitted that she “did not have knowledge to answer the question” of whether “iProov provide[d] prior art to Jum[i]o before the IPR petitions were filed.” Ex. 2086, 44:17-45:8. She also did not know whether Jumio spoke with iProov about the IPR petitions after they were filed. *Id.*, 74:8-11.

When asked whether she investigated who funded these IPR petitions, she would only say that “[w]e were retained by Jum[i]o. Our bills went to Jum[i]o.” *Id.*, 79:24-80:2, 112:9-25. She identified no investigation beyond reviewing draft bills, despite admitting that she did not personally send the bills to Jumio. *Id.*, 97:16-24. She also did not know whether Jumio paid Perkins’ bills for the IPRs. *Id.*, 78:14-79:10. And she refused to answer questions seeking additional details surrounding Jumio’s supposed funding of the petitions. *See, e.g., id.*, 80:3-83:15.

If Jumio had refused to provide Ms. Kaiser for deposition, the Board stated that “we would be inclined of course then to give a patent owner any negative inferences that would possibly come out of” her not appearing. Ex. 2031, 36:10-16. But Jumio’s excessive privilege and work product objections⁹ effectively

⁹ Jumio repeatedly objected on privilege and work product grounds. *See generally* Ex. 2086 (“privilege” appearing 70 times; “work product” appearing 67 times). Despite FaceTec explaining why the objections were improper (*see, e.g., id.*, 16:16-23, 28:15-29:21) and the parties speaking with the Board during the deposition, Jumio continued to object. Late in the deposition, however, Jumio appeared to realize that its privilege objections were overly broad. But instead of withdrawing them, it put the burden on FaceTec to guess which objections Jumio

resulted in an empty witness chair on several relevant topics, so inferences that iProov did direct, control, or fund the IPR petitions are appropriate.

But even if the Board does not apply negative inferences, Ms. Kaiser's testimony—the primary pillar supporting Jumio's argument that iProov is not an RPI—cannot be given any weight. It cannot carry Jumio's burden of proving that it named all RPIs, especially in view of the contrary evidence that iProov had ■

might withdraw, and it would only tell FaceTec if it guessed correctly by re-asking the objected-to questions. *See, e.g., id.*, 117:16-20.

As inappropriate as Jumio's approach was, in the interest of moving forward, FaceTec did ask several questions again. *See, e.g., id.*, 102:23-103:4. Jumio objected to several of them anyway. *See, e.g., id.*, 98:23-99:2. And when FaceTec concluded its questions, Jumio spent pages of the transcript attempting to force FaceTec to ask other questions again, as though it was FaceTec's burden to identify every improper objection Jumio made. *See generally id.*, 113:1-127:3. FaceTec did what it could, and nothing precluded Jumio from identifying the objections it was willing to withdraw or from asking questions on redirect. It did neither (*see id.*), and it cannot now avoid the negative consequences of its improper objections.

[REDACTED] is defending Jumio in California, and was found to have satisfied its indemnification obligations.

VII. Conclusion

FaceTec respectfully requests that the Board issue a Final Written Decision confirming the patentability of the Challenged Claims.

Date: October 16, 2025

Respectfully submitted,

/Joshua L. Goldberg/

Joshua L. Goldberg

Reg. No. 59,369

CERTIFICATE OF COMPLIANCE

Pursuant to 37 C.F.R. § 42.24(c)(1), the undersigned hereby certifies that the foregoing PATENT OWNER'S RESPONSE contains 13,849 words, excluding the parts exempted under 37 C.F.R. § 42.24(c), as measured by the word-processing system used to prepare this paper.

Dated: October 16, 2025

/Joshua L. Goldberg/
Joshua Goldberg (Reg. No. 59,369)

Attorney for Patent Owner FaceTec, Inc.



CERTIFICATE OF SERVICE

Pursuant to 37 C.F.R. § 42.6(e), the undersigned certifies that the foregoing
PATENT OWNER'S RESPONSE was served on October 16, 2025, via email
directed to counsel of record for Petitioner at the following:

Alex S. Yap
AYap@mofo.com

Mehran Arjomand
MARjomand@mofo.com

Jean Nguyen
JNguyen@mofo.com

Jumio-Facetec-IPRs@mofo.com

Dated: October 16, 2025

By: /Lisa C. Hines/
Lisa C. Hines
Case Manager
FINNEGAN, HENDERSON, FARABOW,
GARRETT & DUNNER, LLP