UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

JUMIO CORPORATION,
Petitioner,

v.

FACETEC, INC.,
Patent Owner.

Patent No. 11,157,606

Inter Partes Review No. IPR2025-00107

PETITIONER'S OBJECTIONS TO PATENT OWNER'S DEMONSTRATIVES

Petitioner hereby objects to the demonstrative exhibits submitted by Patent Owner in the above-captioned proceeding (Paper 68, Paper 69). In accordance with the Board's Order Setting Oral Argument (Paper 57), these objections are being timely filed no later than the time of the hearing. Petitioner has met and conferred with Patent Owner, but the parties were unable to resolve the objections below.

Pursuant to Board's Order Setting Oral Argument (Paper 57), the objections "shall identify with particularity which portions of the demonstratives are subject to objection (and should include a copy of the objected-to portions) and include a one (1) sentence statement of the reason for each objection. No argument or further explanation is permitted." The following is an inclusion of the objected-to demonstratives, as well as an identification of the portions being objected to and a statement of the reason for each objection:

- **Slide 39**: [redacted]

PROTECTIVE ORDER MATERIAL – ATTORNEYS' EYES ONLY

[redacted]

39 106Sur-Reply, 6; 107Sur-Reply, 6; 108Sur-Reply, 6; 109Sur-Reply, 6

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

- **Slide 41**: [redacted]

PROTECTIVE ORDER MATERIAL – ATTORNEYS' EYES ONLY

[redacted]

41 106Sur-Reply, 7; 107Sur-Reply, 7; 108Sur-Reply, 7-8; 109Sur-Reply, 7

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

- **Slide 42**: [redacted]

PROTECTIVE ORDER MATERIAL – ATTORNEYS' EYES ONLY

[redacted]

42 106Sur-Reply, 8; 107Sur-Reply, 8; 108Sur-Reply, 8; 109Sur-Reply, 8

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

- **Slide 43**: [redacted]

PROTECTIVE ORDER MATERIAL – ATTORNEYS' EYES ONLY

[redacted]

43 106Sur-Reply, 9; 107Sur-Reply, 9; 108Sur-Reply, 9-10; 109Sur-Reply, 9 DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

- **Slide 44**: [redacted]

- **Slide 54**: [redacted]

PROTECTIVE ORDER MATERIAL – ATTORNEYS' EYES ONLY

[redacted]

54 106Sur-Reply, 11-12; 107Sur-Reply, 11-12; 108Sur-Reply, 11-12; 109Sur-Reply, 11 DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

- **Slide 62**: The arguments relating to "substantial similarity" are new.

PROTECTIVE ORDER MATERIAL – ATTORNEYS' EYES ONLY

Jumio's Response Lacks Credibility

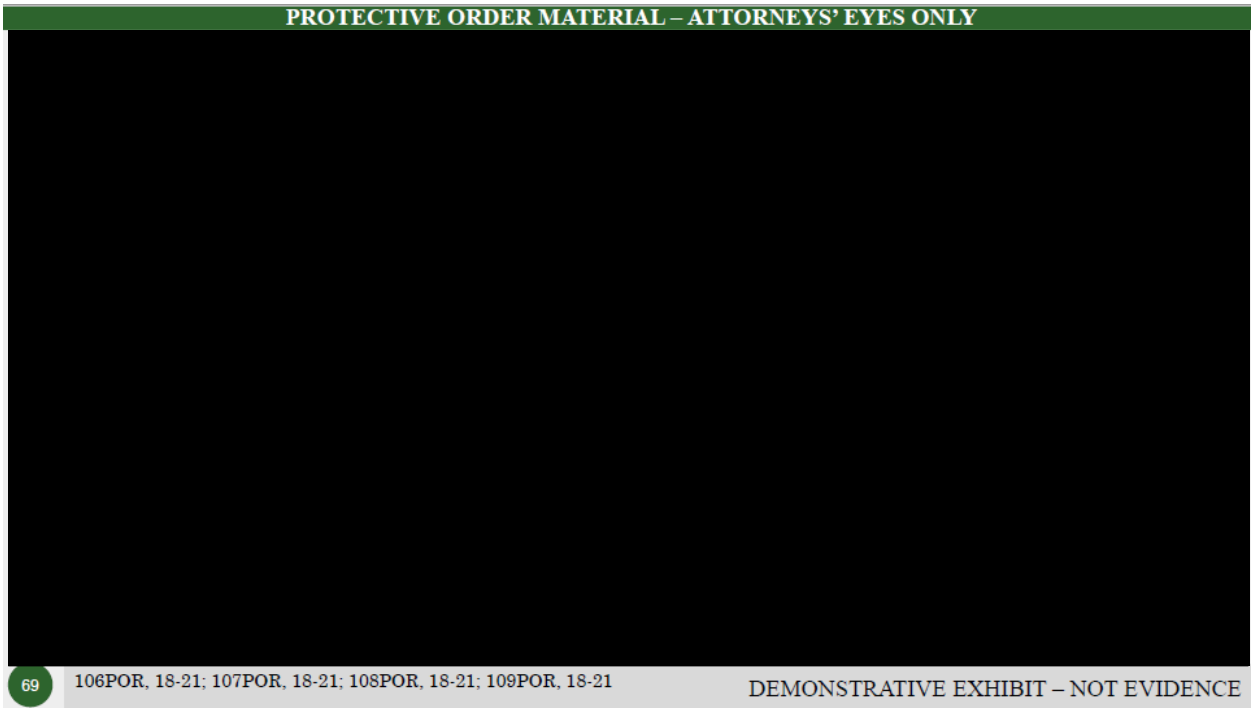
Jumio's Position
FaceTec fails to show "any kind of determination of three-dimensionality resulting from expected differences between images." 106Reply, 32-33; 107Reply, 31-32; 108Reply, 29-30; 109Reply, 31-32

- Dr. Turk established access and substantial similarity
  - Dr. Turk does not have access to iProov's or Petitioner's source code
  - Petitioner does have access to its source code and is conspicuously silent
- Logical inference that iProov's or Petitioner's software is comparing the images for expected differences
  - Imposition on the user

62 106Sur-Reply, 13; 107Sur-Reply, 13; 108Sur-Reply, 13; 109Sur-Reply, 12-13

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

- **Slide 69**: [redacted]



- **Slide 144**: "Derakhshani's images do not need to capture vasculature" is a mischaracterization of Petitioner's argument.

PROTECTIVE ORDER MATERIAL – ATTORNEYS' EYES ONLY

Jumio Redefines Derakhshani's Images

Jumio Argues

Derakhshani's images do not need to capture vasculature or can capture blurry vasculature

106Reply, 2-4; 107Reply, 2-4; 108Reply, 2-4; 109Reply, 2-4

captured simultaneously both with enough precision. (POR, 43.) The spatial metric determination may use a close-up image that captures the eye vasculature in focus (having enough precision) and a further-away image that captures a landmark in focus (eye vasculature is blurred). (EX1059, 144:7-16.) The match

106Reply, 4

16:44-47, 17:45-47.) For example, a close-up image may capture the eye vasculature (with enough precision) for the match score and/or liveness score, and a further-away image for the liveness score. Because the liveness score

106Reply, 2

Derakhshani: images must include vasculature

One or more images of an eye are obtained **602**. The images include a view of a portion of a vasculature of the eye external to a corneal limbus boundary of the eye. The obtained images may be monochrome or represented in various color spaces (e.g., RGB, SRGB, HSV, HSL, or YCbCr). In some imple-

Ex. 1005, 10:25-27

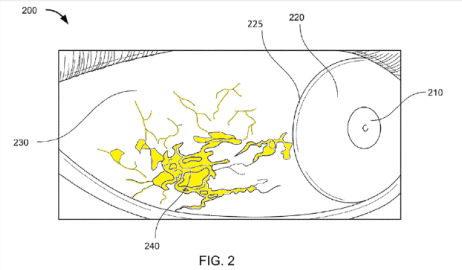


FIG. 2

Ex. 1005, Fig. 2

144

106POR, 31-34, 41-44, 46-48; 106Sur-Reply, 19-20; 107POR, 31-35, 41-44, 47-48; 107Sur-Reply, 19; 108POR, 31-34, 40-43, 45-47; 108Sur-Reply, 19; 109POR, 31-34, 41-44, 46-47; 109Sur-Reply, 19-20

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

- **Slide 157**: "Jumio: the same locations are used for 'feature points' and for 'different locations'" is a mischaracterization of Petitioner's argument.

PROTECTIVE ORDER MATERIAL – ATTORNEYS' EYES ONLY

Zhang's Feature Points are Not Selected Locations

Jumio Argues

Jumio: the same locations are used for "feature points" and for "different locations"
106Reply, 12-13; 107Reply, 11-12; 108Reply, 10-11; 109Reply, 11-12

FaceTec misreads Zhang. Zhang teaches matching feature points across first and second images by "identifying the locations of the same feature points in each of the two images." (EX1006, [0028]-[0029].) Zhang uses the feature points to generate the homography matrix. (EX1006, [0028]-[0029].) When comparing the images, Zhang uses the same extracted feature points having respective "locations" to determine color/intensity value differences. (EX1006, [0031]; EX1060, ¶¶70-72.)

106Reply, 12-13

Zhang: "feature points" are different from "different locations"

[0027] In process **300**, one or more feature points are extracted from two images, referred to in process **300** as the first and second images (act **302**). These first and second images each include a face of the same person, and can be, for example, images **106** of FIG. **1**. The one or more feature points are feature points of the face in the first and second images. A variety of different feature points can be extracted, such as a corner of an eye, a corner of a mouth, a tip of a nose, and so forth. Each feature point is a single pixel or a region of multiple pixels. These feature points can be extracted in a variety of different conventional manners, such as using template matching algorithms, feature matching algorithms, and so forth. In one or more embodiments, techniques for extract-

[0031] An image difference between the warped image (generated in act **308**) and the second image is determined (act **310**). The image difference can be computed in different manners. In one or more embodiments, the warped image and the second image are superimposed and the difference in color or intensity values at the same pixels (locations) in the two images is determined. In other words, for each location [u,v] in the warped image, the difference between the color or intensity value at the location [u,v] in the warped image and the location [u,v] in the second image is determined. The differences determined for these different locations are then combined to generate the image difference. The differences can be combined in different manners, such as being averaged together, being added together, and so forth.

157

106POR, 35-37, 51-53; 106Sur-Reply, 23-24; 107POR, 35-38, 50-53; 107Sur-Reply, 20-22; 108POR, 34-37, 49-52; 108Sur-Reply, 20-21; 109POR, 34-37, 51-53; 109Sur-Reply, 23-24

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

- **Slide 158**: "Jumio: the same locations are used for 'feature points' and for 'different locations'" is a mischaracterization of Petitioner's argument.

PROTECTIVE ORDER MATERIAL – ATTORNEYS' EYES ONLY

Zhang's Feature Points are Not Selected Locations

Jumio Argues

Jumio: the same locations are used for "feature points" and for "different locations"
106Reply, 12-13; 107Reply, 11-12; 108Reply, 10-11; 109Reply, 11-12

FaceTec misreads Zhang. Zhang teaches matching feature points across first and second images by "identifying the locations of the same feature points in each of the two images." (EX1006, [0028]-[0029].) Zhang uses the feature points to generate the homography matrix. (EX1006, [0028]-[0029].) When comparing the images, Zhang uses the same extracted feature points having respective "locations" to determine color/intensity value differences. (EX1006, [0031]; EX1060, ¶¶70-72.)

106Reply, 12-13

Turk: every pixel is at a location

17 A When it says "the same locations," it means a
18 location in the warped image is being compared to the
19 same location in the second image. And that's being
20 done at a number of locations, but those locations are
21 independent and separate from the earlier determination
22 of locations that we discussed, the feature locations.

Ex. 1059, 25:17-22

15 BY MS. NGUYEN:
16 Q Okay. Is there a reason why Zhang used
17 "location" for both?
18 A Yes. Because in an image, every piece of
19 information, every pixel, is at a location. So we're
20 pretty much always talking about locations in images
21 when we talk about image data.

Ex. 1059, 26:7-21

158

106POR, 35-37, 51-53; 106Sur-Reply, 23-24; 107POR, 35-38, 50-53; 107Sur-Reply, 20-22; 108POR, 34-37, 49-52; 108Sur-Reply, 20-21; 109POR, 34-37, 51-53; 109Sur-Reply, 23-24

DEMONSTRATIVE EXHIBIT – NOT EVIDENCE

Dated: March 16, 2026

Respectfully submitted,

By: */Jean Nguyen/*

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Certificate of Service (37 C.F.R. § 42.6(e)(4))

I hereby certify that the attached PETITIONER'S OBJECTIONS TO PATENT OWNER'S DEMONSTRATIVES was served as of the below date via e-mail (by agreement) to the following counsel of record for Patent Owner:

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Dated: March 16, 2026

/*Jean Nguyen*/
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