

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

GIESECKE+DEVRIENT GMBH, GIESECKE+DEVRIENT CURRENCY
TECHNOLOGY GMBH, and PAPIERFABRIK LOUISENTHAL GMBH,
Petitioner,

v.

LUMENCO, LLC,
Patent Owner.

IPR2024-00838
Patent 10,901,191 B2

Before MEREDITH C. PETRAVICK, BENJAMIN D. M. WOOD, and
NABEEL U. KHAN, *Administrative Patent Judges*.

PETRAVICK, *Administrative Patent Judge*.

DECISION
Granting Institution of *Inter Partes* Review
35 U.S.C. § 314

I. INTRODUCTION

A. *Background and Summary*

Giesecke+Devrient GmbH Giesecke+Devrient Currency Technology GmbH, and Papierfabrik Louisenenthal GmbH (collectively, “Petitioner”) filed a Petition requesting *inter partes* review of claims 1–12 (“challenged claims”) of U.S. Patent No. 10,901,191 B2 (Ex. 1001, “the ’191 patent”). Paper 1 (“Pet.”). Lumenco, LLC (“Patent Owner”) file a Preliminary Response. Paper 7 (“Prelim. Resp.”).

Under 35 U.S.C. § 314(a), an *inter partes* review may not be instituted unless the information presented in the petition “shows that there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.”

After considering the Petition, the Preliminary Response, and the evidence of record, we determine the information presented shows a reasonable likelihood that Petitioner would prevail in establishing the unpatentability of at least one of the challenged claims of the ’191 patent.

Accordingly, we institute an *inter partes* review of claims 1–12 of the ’191 patent on the grounds asserted in the Petition.

B. *Real Parties in Interest*

Petitioner identifies the parties named above as the real parties-in-interest. Pet. 77. Patent Owner identifies itself as the real party-in-interest. Paper 5, 2.

C. Related Matters

The parties identify the following related court proceedings:

Lumenco, LLC v. Giesecke+Devrient Currency Technology GmbH, Giesecke+Devrient GmbH f/k/a Giesecke & Devrient GmbH, and Papierfabrik Louisenenthal GmbH, E.D. Tex. No. 2:23-cv-00100-JRG (E.D. Tex. 2023) (dismissed), and

Lumenco, LLC v. USA, Ct. of Fed. Claims No. 1:24-cv-00139-MRS (Fed Cl 2024). Paper 5, 2; Paper 6, 1.

Petitioner also identifies the following related *inter partes* reviews: IPR2024-00836, IPR2024-00837, and IPR2024-00839. Paper 1.

D. The '191 Patent

The '191 patent is titled “Method of Fabricating Arrays of Individually Oriented Micro Mirrors For Use In Imaging Security Devices” and issued on January 26, 2021. Ex. 1001, codes (45), (54).

The '191 patent discloses an anti-counterfeiting device “configured to ‘write’ images with light in one, two, or more spatial planes above and below the surface of an array of micro mirrors.” Ex. 1001, 2:38–41. Figure 2 of the '191 patent is reproduced below.

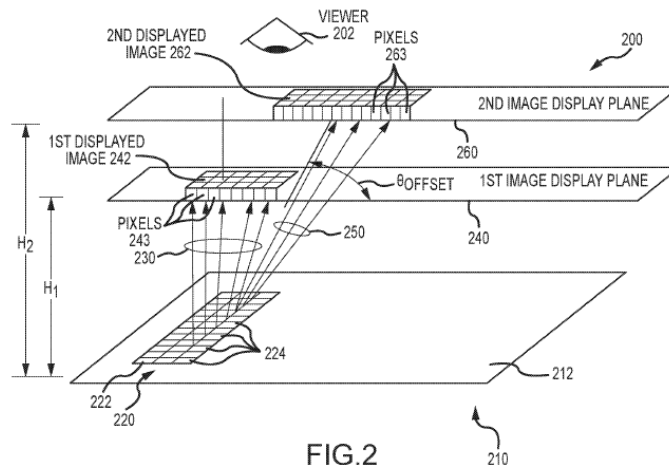


Figure 2 depicts a schematic of an object, such as currency, that includes the anti-counterfeiting device. *Id.* at 4:29–32; 7:28–32. Security device 220 has exposed, upper surface 222 that has an array of micro mirrors 224. *Id.* at 7:35–37. Micro mirrors 224 are “individually oriented to provide reflection of ambient light . . . so as to display one or more floating images that can be observed by a viewer 202.” *Id.* at 7:37–41. First sets of micro mirrors 224 “write” pixels 243 of first display image 242, and second sets of micro mirrors 224 “write” pixels 263 of second display image 262. *Id.* at 7:42–62.

Viewer 202 sees first display image 242 floating above surface 212 and second display image 262 at a greater height above surface 212 and, because of the offset viewing image, viewer 202 typically only sees one image at a time. *Id.* at 8:1–12.

To “write” pixels by reflecting ambient light, the set of micro mirrors are aimed toward an intersection point forming a pixel of an image. *Id.* at 7:50–57. In most embodiments, the set of micro mirrors are arranged to form the base of a cone and reflect light to the apex of the cone. *Id.* at 7:54–65. The cone can be seen in Figure 4 of the ’191 patent, which is reproduced below.

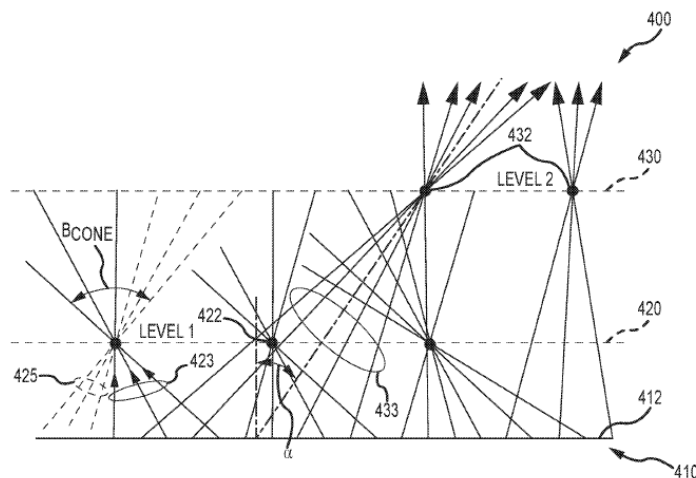


FIG.4

Figure 4 depicts a diagram of the security element providing a two-layer or level image. *Id.* at 8:61–63. The diagram shows three sets of micro mirrors oriented to display pixels 422 in a first plane 420 and two sets of micro mirrors in array 412 oriented to display pixels 432 in second plane 430. *Id.* at 8:63–9:23. Light 423, 433 is reflected to form pixels 422, 432 at an apex of the cones. *Id.*

Although the claims of the '191 patent recite the term “voxel” (*see, e.g., id.* at 21:6), we note that the specification of the '191 patent uses the term “pixel” and not “voxel.” *See generally* Ex. 1001. Patent Owner contends:

A POSITA would have understood that a voxel is a type, or subspecies, of a pixel. Specifically, a voxel is a 3-dimensional pixel. Generally, “voxel” means “volume pixel” and “represents a quantity of 3-D data just as a pixel represents a point or cluster of points in 2-D data.

Prelim. Resp. 7 (citing Ex. 2002, 1; quoting Ex. 2003, 575). This is consistent with Dr. Hesselink’s testimony that “[w]hile [the] '191 patent does not use the term “voxel,” voxels generally have a volume.” Ex. 1003 ¶ 176.

E. Illustrative Claim

Petitioner challenges claims 1–12 of the '191 patent. Claims 1 and 6 are independent. Claims 2–5 depend from claim 1, and claims 7–12 depend from claim 6. Claim 1 is illustrative and reproduced below, with Petitioner’s labeling added in brackets.

1. [1Pre] A method of fabricating a security element useful on paper and coin currency and product labels, comprising:

[1a] providing a substrate; and

- [1b.1] forming an array of micro mirrors on a surface of the substrate, wherein the array of micro mirrors is configured for receiving ambient light and, [1b.2] in response, displaying an image in a plane spaced a distance apart from the surface of the substrate, wherein the image comprises a plurality of pixels,
- [1b.3] wherein the array of micro mirrors includes for each of the pixels a different set of the micro mirrors each having a reflective surface oriented, in a fixed manner, with a body of each of the micro mirrors rotated about at least one of first and second rotation axes extending through the body, to reflect the ambient light toward a point on the plane corresponding to one of the pixels,
- [1b.4] wherein each of the different sets concurrently reflect the ambient light to concurrently generate the plurality of pixels,
- [1b.5] wherein a voxel is created at each of the point on the plane via intersection of two or more beams of the reflected ambient light, and
- [1b.6] wherein each of the created voxels produces an effect of a point source of light floating above the surface of the substrate in the plane.

Ex. 1001, 20:53–21:11.

F. Asserted Grounds

Petitioner asserts that claims 1–12 would have been unpatentable on the following grounds:

Ground	Claims Challenged	35 U.S.C. §	Basis
1	1, 6	103	Fuhse262 ¹
2	1, 6	103	Fuhse262, Fuhse925 ²

¹ DE102010048262A1 (Ex. 1005). We cite to the English language translation at Exhibit 1006.

² U.S. Patent No. 10,639,925 B2 (Ex. 1008).

Ground	Claims Challenged	35 U.S.C. §	Basis
3	2–4, 7–11	103	Fuhse262, Fuhse395 ³
4	2–4, 7–11	103	Fuhse262, Sauvage-Vincent ⁴
5	5, 12	103	Fuhse262, Morford ⁵
6	2–4, 7–11	103	Fushse262, Fuhse925, Fuhse395
7	2–4, 7–11	103	Fuhse262, Fuhse925, Sauvage-Vincent
8	5, 12	103	Fuhse262, Fuhse925, Morford

Petitioner relies on the Declaration of Lambertus Hesselink, Ph.D.
Ex. 1003.

II. ANALYSIS

A. Legal Standards

“In an IPR, the petitioner has the burden from the onset to show with particularity why the patent it challenges is unpatentable.” *Harmonic Inc. v. Avid Tech., Inc.*, 815 F.3d, 1356, 1363 (Fed. Cir. 2016) (citing 35 U.S.C. § 312(a)(3) (requiring *inter partes* review petitions to identify “with particularity . . . the evidence that supports the grounds for the challenge to each claim”)); *Dynamic Drinkware, LLC v. Nat’l Graphics, Inc.*, 800 F.3d 1375, 1378 (Fed. Cir. 2015) (discussing the burden of proof in *inter partes* review). Although we may indicate in this Decision that certain Patent

³ U.S. Patent Application Publication No. 2012/0319395 (Ex. 1010).

⁴ U.S. Patent Application Publication No. 2014/0285892 (Ex. 1033)

⁵ Robert Morford, Wu-Sheng Shih, and JoElle Dachsteiner “Press-patterned UV-curable high refractive index coatings,” Proc. SPIE 6123, Integrated Optics: Devices, Materials, and Technologies X, 612301 (15 February 2006), available at <https://doi.org/10.1117/12.643164> (Ex. 1024).

Owner arguments are not persuasive, in doing so we do not shift the ultimate burden from Petitioner.

A claim is unpatentable under § 103 if the differences between the claimed invention and the prior art are such that the claimed invention, as a whole, would have been obvious before the effective filing date of the claimed invention to a person having ordinary skill in the art to which the claimed invention pertains. “[W]hen a patent claims a structure already known in the prior art that is altered by the mere substitution of one element for another known in the field, the combination must do more than yield a predictable result.” *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 416 (2007) (citing *U.S. v. Adams*, 383 U.S. 39, 50–51 (1966)). The question of obviousness is resolved on the basis of underlying factual determinations, including (1) the scope and content of the prior art; (2) any differences between the claimed subject matter and the prior art; (3) the level of skill in the art; and (4) when in evidence, objective indicia of non-obviousness (i.e., secondary considerations). *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966). At this stage of the proceeding, there is no evidence of objective indicia of non-obviousness.

B. Level of Ordinary Skill in the Art

Petitioner proposes that “a person of ordinary skill in the art (‘POSITA’) would have had a minimum of an undergraduate degree in electrical engineering, mechanical engineering, or physics and at least 2 years of experience in micro-optic based security features.” Pet. 15 (citing Ex. 1003 ¶¶ 82–87).

Patent Owner proposes that a POSITA “would have had an undergraduate degree in electrical engineering, mechanical engineering,

physics, or a similar field and at least 2 years of experience in micro-optic based security features.” Prelim. Resp. 6.

For purposes of this Decision, we adopt Petitioner’s assessment of the level of ordinary skill in the art with the exception of the phrase “at least,” which creates a vague, open-ended upper bound for the level of ordinary skill in the art. Unlike Patent Owner’s proposal, Petitioner’s proposal has evidentiary support. Pet. 15 (citing Ex. 1003 ¶¶ 82–87 (testimony of Dr. Hesselink)). Further, Petitioner’s proposal is consistent with the ’191 patent and the asserted prior art. *See Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001).

We note, however, that Petitioner’s and Patent Owner’s proposals are very similar and that our analysis, at this stage of the proceeding, would be the same regardless of which proposal we adopt.

C. Claim Construction

In this *inter partes* review, we apply the same claim construction standard that would be used in a civil action under 35 U.S.C. § 282(b). 37 C.F.R. § 42.100(b). In applying this standard, we generally give claim terms their ordinary and customary meaning as would be understood by a person of ordinary skill in the art at the time of the invention and in the context of the entire patent disclosure. *See id.*; *Phillips v. AWH Corp.*, 415 F.3d 1303, 1312–14 (Fed. Cir. 2005) (en banc).

Petitioner contends that “no claim terms require express construction.” Pet. 15. “Patent Owner agrees that the terms do not require construction for purposes of evaluating the Petition.” Prelim. Resp. 6.

We do not need to construe any terms explicitly to reach our decision on institution. *See Realtime Data LLC v. Iancu*, 912 F.3d 1368, 1375 (Fed.

Cir. 2019) (“The Board is required to construe ‘only those terms . . . that are in controversy, and only to the extent necessary to resolve the controversy.’” (quoting *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)); *Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (approving Board decision not to construe claim language where construction is not material to the dispute).

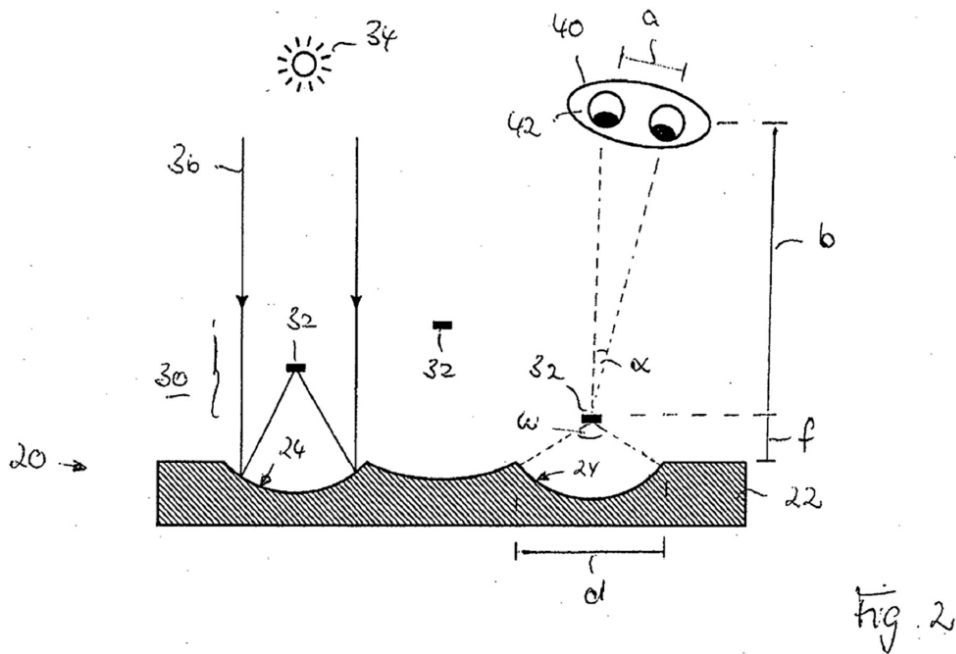
D. Ground 1 — Claims 1 and 6 Over Fuhse262

Petitioner contends that claims 1 and 6 would have been obvious over the combination of the embodiment of Figure 2 and embodiment of Figures 8, 9, and 10 of Fuhse262. Pet. 16–34.

1. Summary of Fuhse262

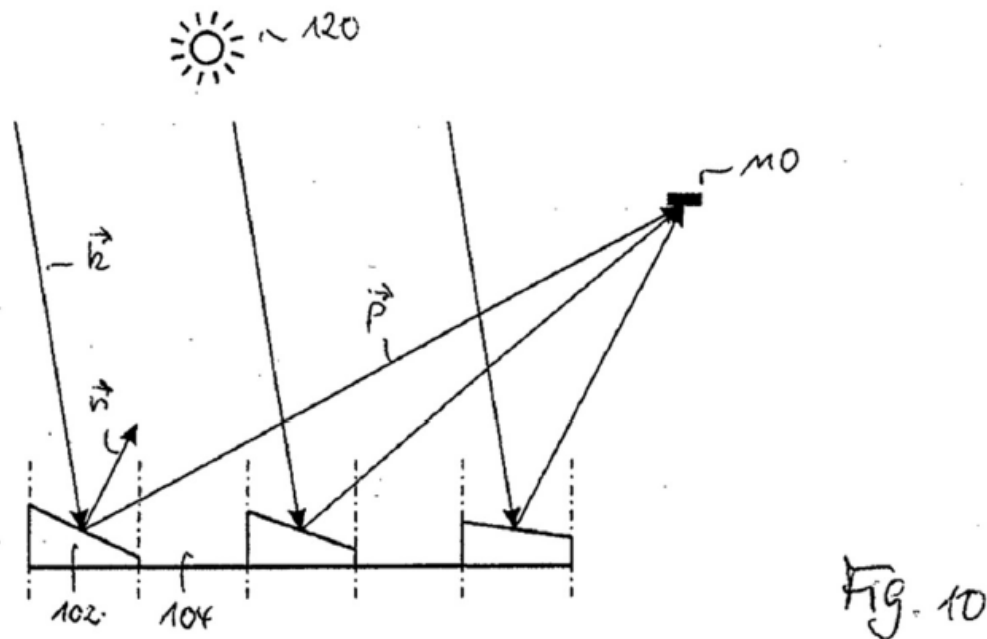
Fuhse262 is a German patent application titled “Depiction Element” and published on April 12, 2012. Ex. 1006, codes (12), (19), (43), (54). Fuhse262 discloses a depiction element on a substrate that creates a light-spot image when illuminated. *Id.* ¶ 10. The light-spot image is composed of a plurality of light spots and appears to float above or below the surface of the substrate. *Id.*

Figure 2 of Fuhse262 is reproduced below.



Fuhse262's Figure 2 depicts a first embodiment "with concave mirrors as reflective optical elements." Ex. 1006 ¶ 42. Figure 2 shows security element 20 having a three-dimensional motif 30 formed by three image points 32 (i.e., light spots). *Id.* ¶ 56. Substrate 22 has concave mirrors 24 which produce light spots 32, when illuminated by light source 34. *Id.* ¶ 57.

Figure 10 of Fuhse262 is reproduced below.



Fuhse262's Figure 10 depicts another embodiment in which the concave mirror is "broken down into micro-optical elements" that are flat mirror surfaces, and "illustrates the calculation of the flat mirror surfaces." *Id.* ¶¶ 48–49. "The advantage is that micro-optic elements with flat surfaces are easier to calculate and produce." *Id.* ¶ 86. As Figure 10 illustrates, micromirrors 102 form light spot 110. *Id.* ¶¶ 91–92.

2. Analysis of Claim 1

Petitioner contends that the combination of the embodiment of Figure 2 of Fush262 and embodiment of Figures 8, 9, and 10 of Fush262 teaches the preamble and limitations 1a–1b.6. Pet. 16–34. For limitation 1b.1, Petitioner also contends that it would have been obvious to a POSITA to replace the curved mirrors of the embodiment of Figure 2 with the micro mirrors of the embodiment of Figures 8, 9, and 10 in order to achieve a

higher resolution and provide for easier calculation and production. *Id.* at 17 (citing Ex. 1006 ¶¶ 83, 86–87; Ex. 1003 ¶ 115), 21–22.

Patent Owner does not specifically dispute Petitioner’s contentions regarding the preamble, limitations 1a–1b.4, and the motivation to combine the different embodiments. *See generally* Prelim. Resp. We have reviewed Petitioner’s contentions and supporting evidence and are persuaded, on this record, that Fuhse262 teaches the preamble and undisputed limitations 1a–1b.4.

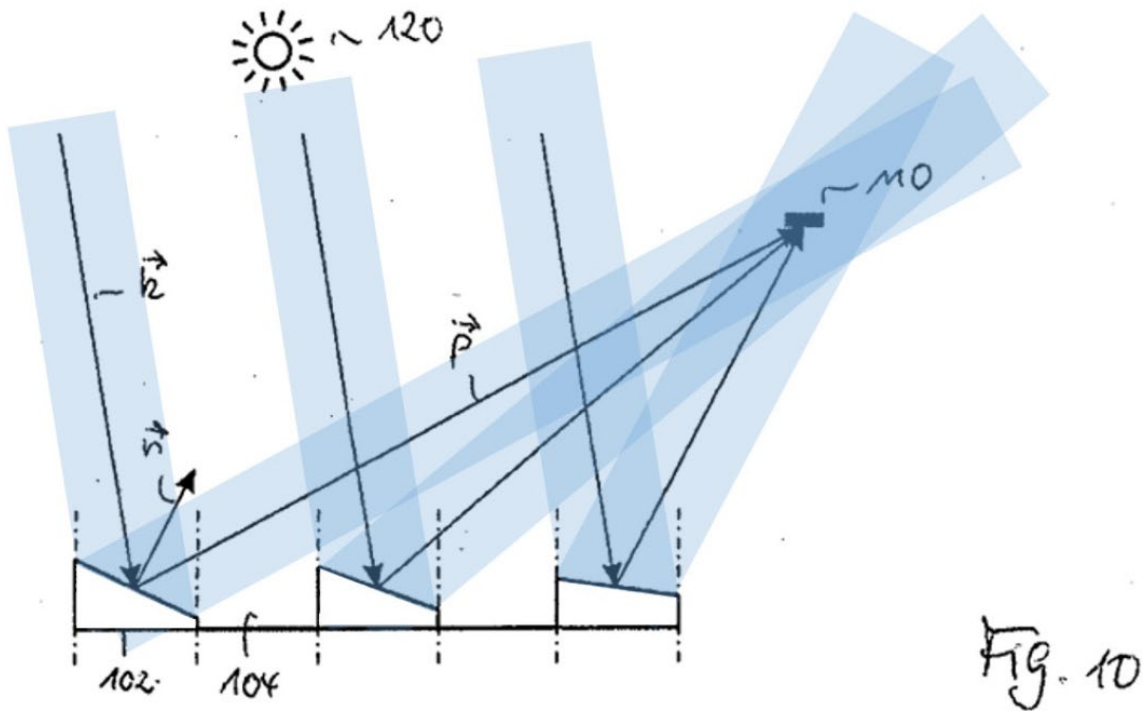
Patent Owner disputes that limitations 1b.5 and 1b.6 are disclosed by Fush262. We address these limitations below.

- a) Limitation 1b.5 “wherein a voxel is created at each of the point on the plane via intersection of two or more beams of the reflected ambient light”*

Relying upon the testimony of Dr. Hesselink, Petitioner contends that, in Fush262, a voxel is created with each of Fuhse262’s light spots at the voxel’s center. Pet. 32–34 (citing Ex. 1003 ¶¶ 175–183).

Dr. Hesselink testifies that Fuhse262’s Figure 10 shows “chief light rays” for each micromirror 102 forming light spot 110. Ex. 1003 ¶ 178. According to Dr. Hesselink, “[a]mbient light reflects from the entire surface of the mirrors and forms reflected beams of light, not just the rays aimed at the center point.” *Id.* To illustrate this, Dr. Hesselink annotated Fush262’s Figure 10 to show the light beams. *Id.* ¶ 178.

Annotated Figure 10 is reproduced below. *Id.* ¶ 178.



Annotated Figure 10 shows light beams in blue, reflecting from the entire surface of micromirrors 102. *Id.* Dr. Hesselink testifies that a voxel is formed at the intersection of the light beams, with light spot 110 as the voxel’s center point. *Id.* ¶¶ 177–182.

Patent Owner first argues that Fuhse262 does not expressly disclose voxels. Prelim. Resp. 7. According to Patent Owner, “Fuhse262 does not use the term ‘voxel’ and does not mention ‘pixels with volume’ or ‘3d pixels’ or any similar term” and that, to the contrary, Fuhse262’s refers to a pixel as an image point defined by its coordinates. Prelim. Resp. 7 (citing Ex. 1006, 36, 95–97, 126–128).

Patent Owner next argues that, “[a]t best, Petitioner has shown that the micro mirror array of Fuhse262 *might*, when implemented in the real word, result in overlapping light beams”, but, “[e]ven then, Petitioner does not explain how or why light beams overlapping in an irregular shape would

necessarily form a voxel for use in displaying an image.” Prelim. Resp. 8–9 (emphasis original). Patent Owner further argues that, if three-dimensional voxels were necessarily the result of the Fuhse262 system, then all images produced by Fuhse262 would be three-dimensional and the system would not be able to create two-dimensional images. *Id.* at 9.

We agree with Patent Owner that Fuhse262 does not explicitly use the term voxel. *See generally* Ex. 1006; Ex. 1003 ¶ 176. However, on the record before us at this stage of the proceeding, we are persuaded by the Petition’s analysis and evidence (in particular, Dr. Hesselink’s testimony), that Fuhse262 teaches a voxel created by intersecting two or more beams of the reflected ambient light. Dr. Hesselink’s testimony sufficiently explains that light beams reflecting from the entire surface of Fuhse262’s micromirrors would create a voxel when the light beams intersect, as shown by Annotated Figure 10.

On this record, Patent Owner’s arguments as to the teachings of Fuhse262 are not sufficiently supported by evidence and amount to mere attorney argument. Mere attorney argument has little evidentiary value and does not outweigh the testimonial evidence of Dr. Hesselink, which presently stands unrebutted. *See Icon Health & Fitness, Inc. v. Strava Inc.*, 849 F.3d 1034, 1046 (Fed. Cir. 2017) (“Attorney argument is not evidence or explanation in support of a conclusion.”); *Invitrogen Corp. v. Clontech Lab., Inc.*, 429 F.3d 1052, 1068 (Fed. Cir. 2005) (“Unsubstantiated attorney argument regarding the meaning of technical evidence is no substitute for competent, substantiated expert testimony.”); *In re Payne*, 606 F.2d 303, 315 (CCPA 1979) (citing *In re Lindner*, 457 F.2d 506, 508 (CCPA 1972)) (“Arguments of counsel unsupported by competent factual evidence of record are entitled to little weight.”).

- b) Limitation 1b.6 “wherein each of the created voxels produces an effect of a point source of light floating above the surface of the substrate in the plane”*

Petitioner contends that Fuhse262 discloses a “light spot image composed of a plurality of light spots” and that the image “floats at a certain height above . . . the substrate surface.” Pet. 34 (citing Ex. 1006 ¶¶ 10, 11, 15, 35, 58–59, 63–69, 83, 89; Ex. 1003 ¶ 177). Petitioner argues that “voxels produce[] an effect of a point source of light at least when a cone can be described in which the voxel is the cone’s apex and the micro mirrors are within the base of the cone.” *Id.* at 35 (citing Ex. 1006 ¶¶ 36, 126; Ex. 1003 ¶¶ 186–188).

Patent Owner argues that, if Fuhse262 did teach voxels, “it would not teach or suggest voxels that produce the effect of a ‘point source of light.’” Prelim. Resp. 10. Patent Owner argues that “[t]he Petition does not explain why a POSITA would understand that the ‘light spots’ of Fuhse262 would necessarily ‘produce[] an effect of a point source of light,’” *Id.* at 11.

On the record before us at this stage of the proceeding, we are persuaded by the Petition’s analysis and evidence (in particular, Dr. Hesselink’s testimony), that Fuhse262 teaches the voxels producing an effect of a point source of light as recited by limitation 1b.6. Fuhse262 discloses a “light spot image composed of a plurality of light spots” (Ex. 1006 ¶ 10) that “floats at a certain height above . . . the substrate surface” (*id.* ¶ 68). Dr. Hesselink testifies that because light rays continue on their paths until disturbed, the light rays depicted in Fuhse262’s Figure 10 would produce an effect of a point source of light when those continuing light rays reach the viewer’s eye. Ex. 1003 ¶ 186. We determine that the cited

portions of Fuhse262 along with Dr. Hesselink's un rebutted testimony provide sufficient support for Petitioner's contention .

Patent Owner further argues that the Petition relies upon improper hindsight bias because Dr. Hesselink's testimony cites to the '191 patent to support his conclusion that Fuhse262's voxels produce a point source of light by being at a cone's apex with micro mirrors within the base of the cone. *Id.* at 11–12 (citing Ex. 1003 ¶ 188).

Patent Owner's argument is unpersuasive. As explained above, we determine that Petitioner provides sufficient explanation, with support from Fuhse262 and Dr. Hesselink's testimony to establish a reasonable likelihood that Fuhse262 teaches limitation 1b.6.

Patent Owner additionally argues that the '191 patent does not stand for the proposition that every voxel formed by mirrors in the base of a cone will produce an effect of a point source of light. Prelim. Resp. 13. According to Patent Owner, the '191 patent states that the specific micro mirror based visual assemblies disclosed in the '191 patent achieve that result and that neither the Petition nor Dr. Hesselink's testimony make a sufficient showing that Fuhse262's system has the same structural configuration or functionality as that described by the '191 patent. *Id.* at 12–13.

Patent Owner's argument is unpersuasive. Dr. Hesselink testifies that a voxel produces an effect of a point source of light when a cone can be described in which the voxel is the cone's apex and the micro mirrors are within the base of the cone. Ex. 1003 ¶ 188. Dr. Hesselink further testifies that Fuhse262 likewise teaches such a cone with micro mirrors within the base of the cone. Ex. 1003 ¶ 188 (citing Ex. 1006 ¶¶ 36, 126). Dr. Hesselink's un rebutted testimony is persuasive at this stage of the

proceeding and sufficiently shows that Fuhse262 contains the specific structure and functionality to produce the claimed point source of light.

c) Conclusion

On the record before us at this stage of the proceeding, we determine that Petitioner has shown a reasonable likelihood that claim 1 is unpatentable over Fuhse262.

E. Remaining Grounds

“When instituting *inter partes* review, the Board will authorize the review to proceed on all of the challenged claims and on all grounds of unpatentability asserted for each claim.” 37 C.F.R. § 42.108(a). We must “either (1) institute as to all claims challenged in the petition and on all grounds in the petition, or (2) institute on no claims and deny institution.” Patent Trial and Appeal Board Consolidated Trial Practice Guide (Nov. 2019),⁶ 5–6, 64; *see also* 37 C.F.R. § 42.108(a), *PGS Geophysical AS v. Iancu*, 891 F.3d 1354, 1359–60 (Fed. Cir. 2018) (stating a decision to institute is “a simple yes-or-no institution choice respecting a petition, embracing all challenges included in the petition”).

Because we have decided to grant institution on Ground 1 with respect to claim 1, we must do the same for claim 6 for Ground 1. We note that for claim 6 of Ground 1, Petitioner has mapped the limitations of the challenged claims to the teachings of the prior art combinations and articulated reasons why one of ordinary skill in the art would have combined

⁶ Available at <https://www.uspto.gov/sites/default/files/documents/tpgnov.pdf?MURL=TrialPracticeGuideConsolidated>

the references, supporting its contentions with citations to the Hesselink Declaration. Pet. 35–41.

Patent Owner at this stage does not raise any arguments specifically directed to claim 6 of Ground 1. *See* Prelim. Resp. 13–14.

Further, because we have decided to institute *inter partes* review based on Ground 1, we must do the same for Grounds 2–8 as well, as institution must include all challenged claims under all asserted grounds. We again note that, for Grounds 2–8, Petitioner has mapped the limitations of the challenged claims to the teachings of the prior art combinations and articulated reasons why one of ordinary skill in the art would have combined the references, supporting its contentions with citations to the Hesselink declaration. Pet. 41–70.

Patent Owner at this stage does not raise any arguments specifically directed to Grounds 2–8. *See* Prelim. Resp. 13–17.

III. CONCLUSION

After considering the evidence and arguments presented in the Petition and taking into account the Preliminary Response, we determine that the information presented in the Petition shows a reasonable likelihood that Petitioner would prevail in establishing the unpatentability of at least one challenged claim of the '191 patent. At this stage of the proceeding, however, we have not made a final determination with respect to the patentability of the challenged claims.

IV. ORDER

In consideration of the foregoing, it is hereby:

ORDERED that, pursuant to 35 U.S.C. § 314(a), an *inter partes* review is instituted for claims 1–12 of the '191 patent on the unpatentability grounds asserted in the Petition; and

FURTHER ORDERED that pursuant to 35 U.S.C. § 314(c) and 37 C.F.R. § 42.4, notice is hereby given of the institution of a trial, which commences on the entry date of this decision.

IPR2024-00838
Patent 10,901,191 B2

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