

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

ABBOTT LABORATORIES,
Petitioner,

v.

NEWTONOID TECHNOLOGIES, LLC,
Patent Owner.

IPR2024-00932
Patent 11,392,818 B2

Before CHRISTOPHER L. OGDEN, SHARON FENICK, and
MARY C. HOFFMAN, *Administrative Patent Judges*.

HOFFMAN, *Administrative Patent Judge*.

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

I. INTRODUCTION

Abbott Laboratories (“Petitioner”) filed a Petition (Paper 2, “Pet.”) requesting *inter partes* review of claims 1 and 4–20 of U.S. Patent No. 11,392,818 B2 (Ex. 1001, “the ’818 patent”). Newtonoid Technologies, LLC (“Patent Owner”) did not file a Preliminary Response.

We have authority to determine whether to institute an *inter partes* review. 35 U.S.C. § 314; 37 C.F.R. § 42.4(a). Under 35 U.S.C. § 314(a), an *inter partes* review may not be instituted “unless . . . the information presented in the petition . . . and any response . . . 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.” Based on the current record and for the reasons explained below, Petitioner has demonstrated a reasonable likelihood of prevailing with respect to at least one of the challenged claims of the ’818 patent. We institute this *inter partes* review.

A. REAL PARTIES IN INTEREST

Petitioner identifies itself, Abbott Laboratories, as the real party in interest. Pet. 76. Patent Owner identifies itself, Newtonoid Technologies, LLC, as the real party in interest. Paper 4, 2.

B. RELATED PROCEEDINGS

The parties identify *Newtonoid Technologies, LLC v. Abbott Laboratories*, 1:23-cv-2532 (N.D. Ill.) as a related proceeding. Pet. 76; Paper 4, 2.

II. BACKGROUND

A. THE '818 PATENT (EX. 1001)

The '818 patent relates to a user instrument for engaging in a transaction including “a graphically encoded icon having a static portion, and an intrinsic portion comprising an area of stimuli-responsive material,” seen in Figure 4B below. Ex. 1001, 2:2–7.

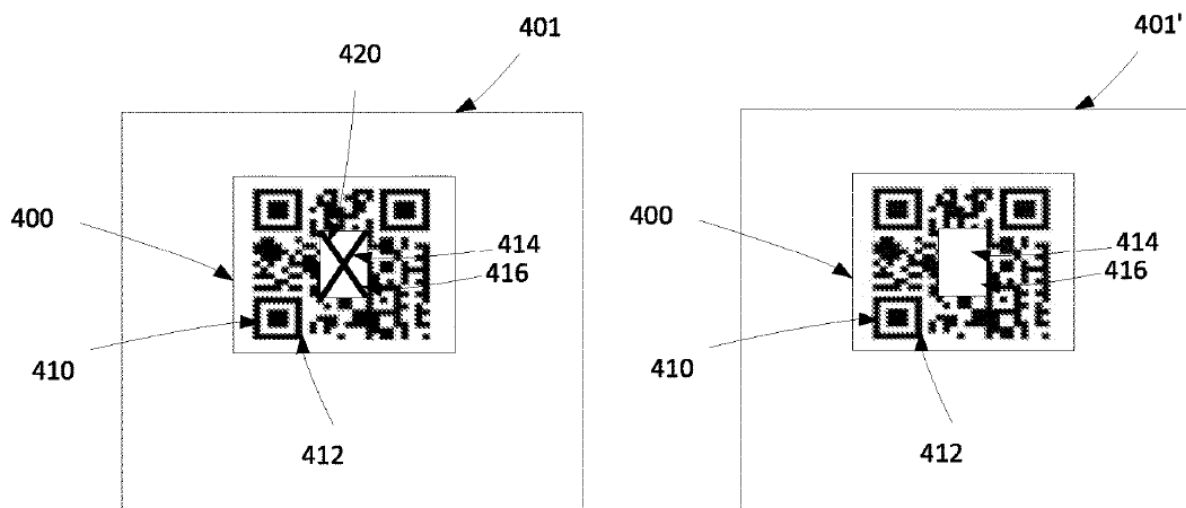


FIG. 4B

Figure 4B above depicts containers 401, 401', each having label 400 including graphically encoded icon 410. Ex. 1001, 7:42–44. The graphically encoded icon includes static portion 412 containing static machine-readable indicia and intrinsic attribute portion 414 containing irreversible or semi-irreversible stimuli-responsive material. *Id.* at 7:45–48. In response to a trigger (e.g., a change in temperature), the stimuli-responsive material (e.g., temperature sensitive polymer 416) transforms from a first state to a second state, resulting in trigger notification “X” 420. *Id.* at 6:35–43, 8:1–17. The first and second states of the stimuli-responsive material define first and second machine-readable

indicia, respectively. *Id.* at 2:4–10, 8:23–27. The “second machine-readable indicia comprises information to permit or deny the user to engage in a . . . transaction.” *Id.* at 2:12–14, 8:2–34.

B. CHALLENGED CLAIMS

The Petition challenges claims 1 and 4–20 of the ’818 patent. Pet. 2. Claims 1, 8, 14, and 16 are independent claims. Ex. 1001, 30:34–32:30. Independent claim 8 is illustrative and reads as follows:

8. [8pre]¹ A graphically encoded icon, comprising:
[8a] a label attached to an object, the label comprising a static portion and an intrinsic portion;
wherein:
[8b] the static portion comprises machine-readable indicia;
[8c] the intrinsic portion comprises an area of stimuli-responsive material;
[8d] the stimuli-responsive material is configured to change from a first state to a second state in response to a trigger, the change in state being based on an attribute about the object; and
[8e] the transformation of the stimuli-responsive material is a change in the transparency of the stimuli-responsive material.

Ex. 1001, 31:9–22.

¹ For ease of reference, we include bracketed designations for the preamble recitation and limitations of claim 8.

C. ASSERTED GROUNDS OF UNPATENTABILITY

We summarize the grounds advanced in the Petition below:

Ground	Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1a	8–15	103	Prusik ²
1b	1, 4–7, 16–20	103	Prusik, Vaillant ³
2	8–15	103	Burg ⁴
3	8–15	103	Dimov ⁵

Pet. 2.

In support of its arguments, Petitioner relies on a declaration of Dr. Majid Sarrafzadeh. Ex. 1003.

III. ANALYSIS

A. LEVEL OF ORDINARY SKILL IN THE ART

The level of ordinary skill in the art at the time of the invention is a factual determination that provides a “primary guarantee of objectivity” in an obviousness analysis. *Al-Site Corp. v. VSI Int’l Inc.*, 174 F.3d 1308, 1324 (Fed. Cir. 1999) (citing *Graham v. John Deere Co.*, 383 U.S. 1, 17–18 (1966); *Ryko Mfg. Co. v. Nu-Star, Inc.*, 950 F.2d 714, 718 (Fed. Cir. 1991)).

Petitioner asserts that a person of ordinary skill in the art (“POSITA”), as of the earliest priority date of the ’818 patent, would have had “a bachelor’s

² Prusik et al., US 2016/0292486 A1, published October 6, 2016. Ex. 1005 (“Prusik”).

³ Vaillant, US 7,691,634 B2, issued April 6, 2010. Ex. 1006.

⁴ Burg et al., US 2015/0308961 A1, published October 29, 2015. Ex. 1007 (“Burg”).

⁵ Dimov et al., US 10,146,909 B2, issued December 4, 2018. Ex. 1008 (“Dimov”).

degree in computer science, electrical engineering, systems engineering, biomedical engineering (or a related or equivalent field), and two . . . years of experience researching, developing, designing and/or evaluating embedded systems, graphically encoded icons, or diagnostic systems that provide dynamic information,” and that “less or different education but more relevant practical experience, or vice versa, may also meet this standard.” Pet. 7. Petitioner also asserts that “[a] POSITA may be part of an interdisciplinary team with others having the relevant experience set forth above,” and that the prior art evidences the level of skill in the art. *Id.* (citing Ex. 1003 ¶¶ 16–21).

Patent Owner did not file a Preliminary Response and thus does not currently dispute Petitioner’s level of ordinary skill in the art. For purposes of this Decision, we find Petitioner’s formulation sufficient at this stage, except that we need not decide at this stage whether a POSITA would have been “part of an interdisciplinary team with others having the relevant experience,” or who would have been part of such a team. With or without that provision, Petitioner’s proposal appears at this stage to be generally consistent with the technical background described in the ’818 patent, and with the prior art of record. *See* Ex. 1001, 1:31–2:43; *see also Okajima v. Bourdeau*, 261 F.3d 1350, 1355 (Fed. Cir. 2001) (explaining that specific findings regarding ordinary skill level are not required “where the prior art itself reflects an appropriate level and need for testimony is not shown” (quoting *Litton Indus. Prods., Inc. v. Solid State Sys. Corp.*, 755 F.2d 158, 163 (Fed. Cir. 1985))). To the extent that we may need to further characterize the level of ordinary skill, the parties may develop this issue at trial.

B. CLAIM CONSTRUCTION

In an *inter partes* review, the Board construes the terms of a patent claim “in accordance with the ordinary and customary meaning of such claim as understood by one of ordinary skill in the art and the prosecution history pertaining to the patent.” 37 C.F.R. § 42.100(b); *see Phillips v. AWH Corp.*, 415 F.3d 1303, 1313 (Fed. Cir. 2005) (en banc).

Petitioner does not propose any express claim construction. Pet. 8. We also determine that no express claim construction is necessary for our Decision. *See Nidec Motor Corp. v. Zhongshan Broad Ocean Motor Co.*, 868 F.3d 1013, 1017 (Fed. Cir. 2017) (holding that only terms in controversy must be construed “and only to the extent necessary to resolve the controversy”) (citing *Vivid Techs., Inc. v. Am. Sci. & Eng’g, Inc.*, 200 F.3d 795, 803 (Fed. Cir. 1999)).

C. OVERVIEW OF ASSERTED PRIOR ART

1. *Prusik (Ex. 1005)*

Prusik describes “combining preprinted information together with coded sensor information within a two-dimensional [2D] barcode” on or in a container. Ex. 1005, code (57), ¶ 3. The 2D barcode (i.e., a machine-readable representation of data such as a QR code) includes “a set of static data and a set of dynamic data.” *Id.* ¶¶ 1, 5. The 2D barcode is printed with static ink but the dynamic data is printed using “dynamic ink which changes states responsive to at least one environmental change, such that the set of dynamic data is in one of a plurality of states.” *Id.* Figure 6C below illustrates a 2D barcode in two states. *Id.* ¶ 105.

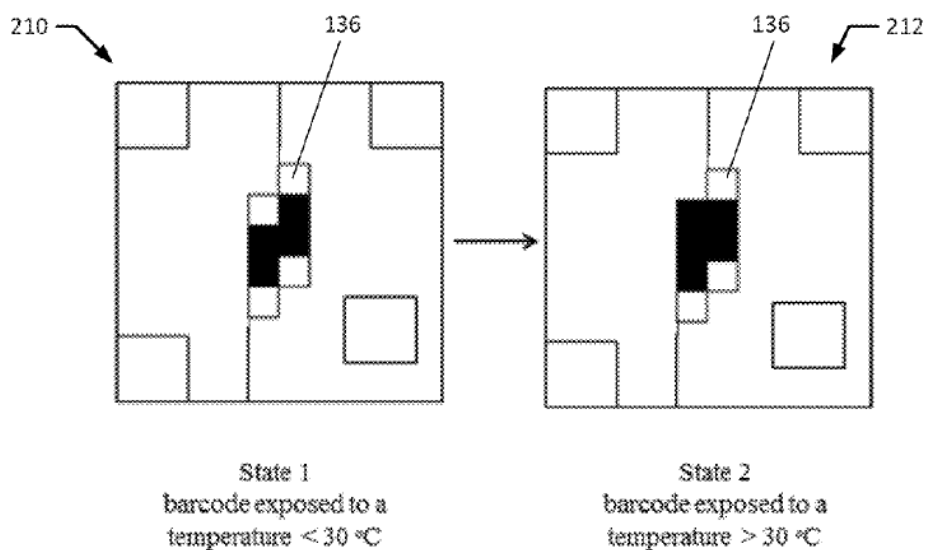


FIG. 6C

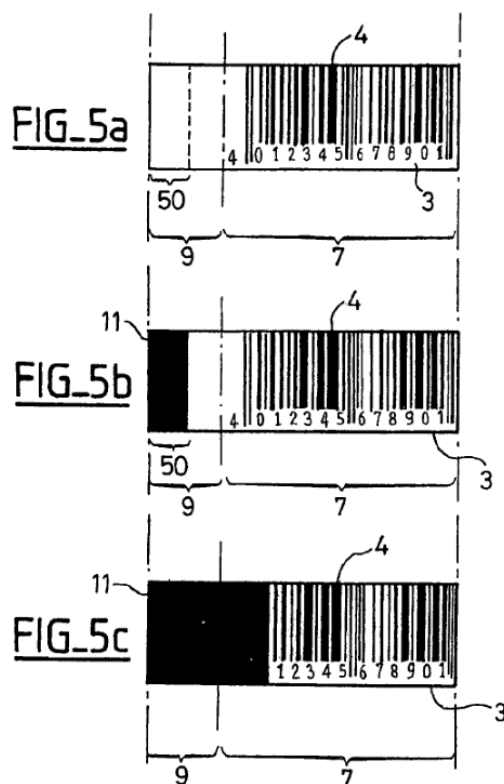
Figure 6C, above, illustrates dynamic data 136 printed with dynamic ink that changes from first state 210 to second state 212 upon reaching a temperature above 30°C. Ex. 1005 ¶ 105. When the dynamic ink changes color, the dynamic data may be decoded by a reader, thereby indicating that the container was exposed to a temperature above 30°C and that the contents of the container may have experienced thermal degradation. *Id.* ¶ 85.

Within the dynamic data, the 2D barcode may include visual patterns and images, such as warning signs or symbols, or any other type of designed graphics. *Id.* ¶ 101.

2. *Vaillant (Ex. 1006)*

Vaillant describes “systematically and automatically controlling a product, whose preservation in a distribution circuit depends on temperature, in particular a product subjected to a cold chain.” Ex. 1006, code (57). Vaillant describes affixing a barcode and a component on the product. *Id.* at 2:29–35. The component comprises at least one part comprising masking means to mask elements of

the bar code when, e.g., the temperature of the product exceeds a specific temperature threshold, as seen below in Figures 5a–5c. *Id.* at 2:36–40.



Figures 5a–5c, above, illustrate the progressive masking of bars 4 of bar code 3 by diffusion of first substance 11. Ex. 1006, 8:25–29, 12:58–60. In Figure 5a, the first substance does not mask warning zone 50, indicating that the bar code has not undergone a break in the cold chain. *Id.* at 12:60–61. In Figure 5b, the first substance masks the warning zone, indicating that the bar code underwent a brief break in the cold chain. *Id.* at 12:65–66. In Figure 5c, the first substance masks some bars of the bar code, indicating that the bar code underwent a prolonged break in the cold chain. *Id.* at 13:2–3. The first substance forms a screen between certain elements of the bar code and an

automatic processing unit such that the product can no longer be sold. *Id.* at 13:5–8.

3. *Burg (Ex. 1007)*

Burg describes a diagnostic instrument, seen below in Figure 1, “to test a patient fluid sample for a variety of diseases and patient conditions.” Ex. 1007 ¶ 46.

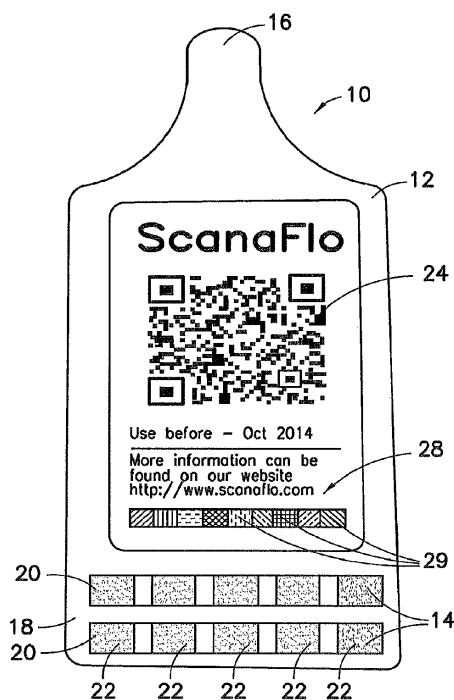


FIG.1

Figure 1, above, illustrates diagnostic instrument 10 including paddle 12 having testing region 18 including test strip indentations 20 for holding test strips 14, which include chemical test pads 22. Ex. 1007 ¶ 47. The paddle also includes handle 16, unique identification 24 (such as a bar code), and reference color bar 28 having color samples 29. *Id.* ¶¶ 47, 49–50. An expiration date may

be directly printed on the label (as shown in Figure 1 above) or encrypted in the bar code. *Id.* ¶ 50.

The chemical test pads contain a color-changing reagent for identifying the concentration of certain analytes in a fluid sample. Ex. 1007 ¶ 47. To test for analytes, the user exposes the test strip to the fluid sample and then, using a portable electronic device, captures and analyzes a digital image of the diagnostic instrument. *Id.* ¶¶ 47, 51, 53. The color samples on the reference color bar are used for image processing to calibrate the digital image in order to improve the quality and accuracy of color analysis. *Id.* ¶ 49.

4. *Dimov (Ex. 1008)*

Dimov describes a diagnostic system that performs disease diagnostic tests using an optical property modifying device and a mobile device, as seen below in Figure 2. Ex. 1008, code (57).

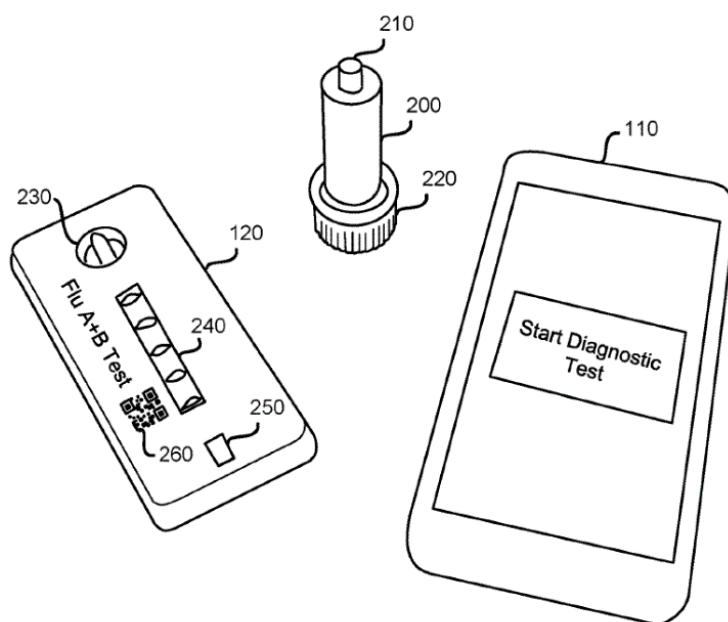


FIG. 2

Figure 2, above, illustrates three devices: optical property modifying device or cartridge 120, collection tube 200, and mobile device 110. Ex. 1008, 4:57–5:4. The cartridge includes collection tube interface 230, reaction chambers 240, indicator or colored light 250, and QR code 260. *Id.* at 4:67–5:10. The collection tube includes cap 220, which encloses a biological sample within the collection tube, and cartridge interface 210 for physically contacting the cartridge’s collection tube interface. *Id.* at 6:19–30.

When the collection tube is attached to the cartridge, the collection tube provides a patient’s biological sample to the cartridge’s reaction chambers. Ex. 1008, 6:19–30. When indicator 250 switches from a yellow to green colored light, the test is complete. *Id.* at 5:14–16. A user then captures an image of the reaction chambers using an optical sensor of the mobile device. *Id.* at 1:54–56. Based on an analysis of the captured image, the diagnostic system can determine a test result of a disease diagnostic test for the patient. *Id.* at 1:64–66.

The user can also scan the cartridge’s QR code to determine certain information, such as test type or expiration date. *Id.* at 5:21–28.

D. LEGAL PRINCIPLES

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.” 35 U.S.C. § 103; *see KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). When a ground in a petition is based on a combination of references, we consider “whether there was an apparent reason to combine the known elements in the fashion claimed by the patent at issue.” *Id.* at 418 (citing

In re Kahn, 441 F.3d 977, 988 (Fed. Cir. 2006)). We base our obviousness inquiry on factual considerations 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) any objective indicia of obviousness or non-obviousness that may be in evidence. *See Graham*, 383 U.S. at 17–18.

E. ASSERTED OBVIOUSNESS OVER PRUSIK

Petitioner contends that claims 8–15 are unpatentable under § 103 as obvious over Prusik. Pet. 8–29. At this stage, Patent Owner does not contest Petitioner’s contentions.

1. *Claim 8*

We begin our analysis with independent claim 8. For the reasons explained below, we preliminarily determine that Petitioner has shown a reasonable likelihood that claim 8 would have been obvious over Prusik.

Limitation 8pre recites “A graphically encoded icon.” Ex. 1001, 31:9. Petitioner contends this preamble limitation is not limiting. Pet. 11. Petitioner also identifies Prusik’s “two dimensional barcode with dynamic environmental data.” *Id.* (citing Ex. 1005, code (57), Figs. 3A–D; Ex. 1003 ¶¶ 111–113).

Limitation 8a recites “a label attached to an object, the label comprising a static portion and an intrinsic portion.” Ex. 1001, 31:10–11. Petitioner identifies Prusik’s “sensor-augmented two-dimensional barcode symbol provided on or in the container,” wherein the “barcode label includes a set of static data 134 [and] a set of dynamic data 136.” Pet. 12–13 (citing Ex. 1005, code (57), ¶¶ 3, 70); Ex. 1003 ¶¶ 114–120.

Limitation 8b recites “the static portion comprises machine-readable indicia.” Ex. 1001, 31:13. Petitioner identifies Prusik’s teachings that “static

data 134 is part of the ‘encoded data region 162’ of the 2D barcode label,” that “static data 134 is readable by the reader of the 2D barcode,” and that a barcode is an “optical machine-readable representation of data.” Pet. 14–15 (citing Ex. 1005 ¶¶ 1, 70, 84); Ex. 1003 ¶¶ 121–127.

Limitation 8c recites “the intrinsic portion comprises an area of stimuli-responsive material.” Ex. 1001, 31:14–15. Petitioner identifies Prusik’s teaching that the dynamic data “is printed using dynamic ink” that is “adapted to activate in response to the occurrence of a specific environment factor.” Pet. 15–16 (citing Ex. 1005 ¶¶ 6, 84); Ex. 1003 ¶¶ 128–131.

Limitation 8d recites “the stimuli-responsive material is configured to change from a first state to a second state in response to a trigger, the change in state being based on an attribute about the object.” Ex. 1001, 31:16–19. Petitioner identifies Prusik’s teaching that “dynamic ink can change states based on a trigger ‘such as temperature, time, time and temperature, freezing, radiation, toxic chemicals, or a combination of such factors, or the like.’” Pet. 17–18 (citing Ex. 1005 ¶¶ 84, 105, Fig. 6C); Ex. 1003 ¶¶ 132–137. Petitioner contends Prusik’s dynamic ink changes from a first state to a second state based on a change in an attribute of the object, because “Prusik’s prior art label changes states based on the temperature of the product to which it is attached.” Pet. 18–19 (citing Ex. 1003 ¶¶ 135–136; Ex. 1005 ¶¶ 85, 162).

Limitation 8e recites “the transformation of the stimuli-responsive material is a change in the transparency of the stimuli-responsive material.” Ex. 1001, 31:20–22. Petitioner identifies Prusik’s teaching that the dynamic ink “may change levels of transparency or opacity.” Pet. 19–20 (citing Ex. 1005 ¶¶ 84, 87, 89); Ex. 1003 ¶¶ 138–143.

Based on the teachings cited by Petitioner, discussed above, we preliminarily determine that Petitioner has sufficiently demonstrated that Prusik teaches or suggests each of the limitations 8pre–8e to an ordinarily skilled artisan. Thus, at this stage, we determine that Petitioner is reasonably likely to prevail in showing that claim 8 is unpatentable.

2. *Claims 9–13*

Claim 9, depending from claim 8, recites “the change in state of the stimuli-responsive material results in machine-readable indicia.” Ex. 1001, 31:23–25. Petitioner identifies Prusik’s teaching that “the set of dynamic data 136 is readable by a reader of the 2D barcode . . . when the set of dynamic data 136 is in each one of the plurality of states.” Pet. 21 (citing Ex. 1005 ¶¶ 84, 85); Ex. 1003 ¶¶ 145–151. For example, the change in state may result in revealing an underlying machine-readable bit pattern or covering a portion of the barcode. Pet. 22 (citing Ex. 1005 ¶ 89).

Claim 10, depending from claim 9, recites “the machine-readable indicia of the stimuli-responsive material is non-human readable.” Ex. 1001, 31:26–28. Petitioner identifies, for example, Prusik’s “[2D] barcode encoded with . . . dynamic data 136”; Petitioner further contends that a POSITA would have understood Prusik’s encoded 2D barcode (a QR code) to be non-human readable. Pet. 22–23 (citing Ex. 1005 ¶¶ 1, 84, 96); Ex. 1003 ¶¶ 152–156; *see also* Ex. 1002 (’818 patent file history), 48 (Examiner finding that a QR code is non-human readable).

Claim 11, depending from claim 10, recites “the machine-readable indicia of the static portion is non-human readable.” Ex. 1001, 31:29–31. Petitioner identifies, for example, Prusik’s “[2D] barcode encoded with the static data

134”; Petitioner further contends that a POSITA would understand Prusik’s encoded 2D barcode (a QR code) to be non-human readable. Pet. 24; *id.* at 22 (citing Ex. 1005 ¶¶ 1, 84); Ex. 1003 ¶¶ 157–158; *see also* Ex. 1002, 48 (Examiner finding that a QR code is non-human readable).

Claim 12, depending from claim 8, recites “the trigger is a change in temperature, and wherein the trigger occurs when the change in temperature is above or below a predetermined threshold.” Ex. 1001, 31:32–35. Petitioner identifies Prusik’s teaching that the dynamic ink changes, for example, when there is “an environmental change such as the temperature rising above 30° C.” Pet. 24–25 (citing Ex. 1005 ¶¶ 84, 105, Fig. 6C); Ex. 1003 ¶¶ 159–166.

Claim 13, depending from claim 8, recites “the trigger occurs automatically based on a predetermined condition about the attribute of the object.” Ex. 1001, 31:36–38. Petitioner identifies Prusik’s teaching that “the change in state of the dynamic data 136 from a first state to a second state in the two-dimensional barcode applied to a container can be based on predetermined environmental factors” including temperature. Pet. 29 (citing Ex. 1005 ¶¶ 2, 3, 84, 105); Ex. 1003 ¶¶ 167–169. Petitioner contends a POSITA would have understood these environmental factors are a predetermined condition about the attribute of the container/object and that the trigger—e.g., reaching a certain temperature—occurs automatically. *Id.*

Based on the teachings cited by Petitioner, discussed above, we preliminarily determine that Petitioner has sufficiently demonstrated that Prusik teaches or suggests all the limitations of claims 9–13 to an ordinarily skilled artisan. At this stage, we determine that Petitioner is reasonably likely to prevail in showing that claims 9–13 are unpatentable.

3. *Claims 14 and 15*

Claims 14 and 15 recite similar subject matter as claims 8 and 13, respectively, except that claim 14 requires a change in reflection rather than transparency. Ex. 1001, 31:39–32:15. Petitioner advances arguments mapping with particularity every limitation of claims 14 and 15 to teachings in Prusik. Pet. 10–29. For example, Petitioner identifies Prusik’s teaching that the dynamic ink “may change levels of reflectivity or absorptivity.” Pet. 19–20 (citing Ex. 1005 ¶ 84, 111); Ex. 1003 ¶ 142. At this stage, we determine that Petitioner is reasonably likely to prevail in showing that claims 14 and 15 are unpatentable.

F. ASSERTED OBVIOUSNESS OVER PRUSIK AND VAILLANT

Petitioner contends that claims 1, 4–7, and 16–20 are unpatentable under § 103 as obvious over Prusik in view of Vaillant. Pet. 29–46. At this stage, Patent Owner does not contest Petitioner’s contentions.

1. *Claim 1*

For the reasons explained below, we preliminarily determine that Petitioner has shown a reasonable likelihood that claim 1 would have been obvious over Prusik and Vaillant.

Independent claim 1 includes limitations similar to claims 8 and 9, which Petitioner contends are taught by Prusik, as discussed above. *See* Pet. 10–21. Claim 1 contains further recitations relating to a transaction, namely, 1) “A user instrument for engaging in a transaction,” and 2) “the second machine-readable indicia comprises information to permit or deny the user to engage in a transaction via the user instrument.” Ex. 1001, 30:34–50.

With respect to “A user instrument for engaging in a transaction,” Petitioner contends this preamble is not limiting. Pet. 37. Petitioner also

identifies Prusik’s 2D barcode label and Vaillant’s marker affixed on a product for “managing the marketing of a product.” *Id.* (citing Ex. 1005, code (57); Ex. 1006, 3:47–57; Ex. 1003 ¶¶ 178–180). Petitioner contends “[w]hen Prusik’s label is used for ‘managing the marketing of the product’ as disclosed in Vaillant, it is a user instrument for ‘engaging in a transaction’ between the various entities involved in bringing the product to market, including the consumer.” *Id.* (citing Ex. 1003 ¶ 180). With respect to the second limitation, Petitioner identifies Vaillant’s teaching that “[w]hen the barcode indicates that a temperature threshold has been exceeded, ‘the product can . . . no longer be sold.’” Pet. 40 (citing Ex. 1006, 13:4–8). Petitioner contends that combining Vaillant’s marketing management system (which prevents product sales above threshold temperatures) with Prusik’s barcode labels (which indicate threshold temperature exposure) teaches or suggests the claimed information to permit or deny the user to engage in a transaction via the user instrument. *Id.* at 39–40 (citing Ex. 1005 ¶¶ 84, 105; Ex. 1003 ¶¶ 186–189).

Petitioner contends both Prusik and Vaillant use modified barcodes to provide temperature exposure information to a user for product preservation purposes,⁶ and that a POSITA would have been motivated to combine Prusik with Vaillant’s marketing management system to systematically and automatically control a product whose preservation in a distribution circuit depends on the temperature. Pet 34–35 (citing Ex. 1006, 6:58–51; Ex. 1003 ¶ 174). For example, according to Petitioner, a POSITA would have been motivated to modify Prusik’s system with Vaillant “to prevent the sale of a

⁶ Petitioner indicates that Vaillant is cited on the face of the patent issued from Prusik (Ex. 1022). Pet. 34.

product where the dynamic data in the two-dimensional barcode indicates that the product has been exposed to a temperature exceeding a predetermined threshold.” Pet. 36 (citing Ex. 1003 ¶ 177). Petitioner also contends that “applying a sale acceptance/rejection functionality to Prusik’s barcode reader is a mere application of a known method of product handling and processing to Prusik’s system to achieve the predictable result of preventing sale of products that have been exposed to hazardous or improper environmental conditions.” Pet. 35–36 (citing Ex. 1003 ¶ 176).

Based on the forgoing, we determine that Petitioner has provided sufficient evidence and reasoning to demonstrate that the combination of Prusik and Vaillant would have rendered claim 1 obvious to an ordinarily skilled artisan. Thus, at this stage, we determine that Petitioner is reasonably likely to prevail in showing that claim 1 is unpatentable.

2. *Claims 4–7*

Claim 4, depending from claim 1, recites “the user instrument is a label.” Ex. 1001, 30:64–65. As discussed above, Petitioner identifies Prusik’s 2D barcode label. Pet. 41 (citing Ex. 1003 ¶¶ 190–191); *id.* at 37 (citing Ex. 1005, code (57)).

Claim 5, depending from claim 1, recites “a second area of stimuli-responsive material configured to transform in response to a trigger, wherein the transformation of the stimuli-responsive material of the second area results in human readable indicia.” Ex. 1001, 30:66–31:3. Petitioner identifies Prusik’s teaching that the stimuli-responsive material “may include ‘visual patterns and images of any type, such as ISO or ANSI or ISO warning signs or symbols, or any other type of designed graphic.’” Pet. 41 (citing Ex. 1005 ¶ 101). Petitioner

contends that “[a] POSITA would have understood that the visual pattern or image would be designed to be human readable to alert the human reader to the intended warning.” *Id.* at 41–42 (citing Ex. 1003 ¶ 192).

Claim 6, depending from claim 5, recites “the second area of stimuli-responsive material forms a part of the graphically encoded icon.” Ex. 1001, 31:4–6. Petitioner identifies the “visual patterns and images,” discussed above with respect to claim 5, as occupying components of the 2D barcode/graphically encoded icon. Pet. 42 (citing Ex. 1005 ¶¶ 76, 101); Ex. 1003 ¶ 193.

Claim 7, depending from claim 1, recites “the machine-readable indicia is non-human readable.” Ex. 1001, 31:7–8. Petitioner identifies Prusik’s 2D barcode (e.g., a QR code). Pet. 43 (citing Ex. 1005 ¶¶ 1, 84; Ex. 1003 ¶ 194); *see also* Ex. 1002, 48 (Examiner finding that a QR code is non-human readable).

We preliminarily determine that Petitioner has provided sufficient evidence and reasoning to demonstrate that claims 4–7 would have been obvious over the combination of Prusik and Vaillant. At this stage, we determine that Petitioner is reasonably likely to prevail in showing that claims 4–7 are unpatentable.

3. *Claims 16–20*

Claims 16–20 recite subject matter similar to that discussed above, for example, with respect to claims 1, 4, 10, and 13. Petitioner advances arguments mapping with particularity every limitation of claims 16–20 to teachings in Prusik and Vaillant. Pet. 43–46. At this stage, we determine that Petitioner has provided sufficient evidence and reasoning to demonstrate that claims 16–20 would have been obvious over the combination of Prusik and Vaillant, and that

Petitioner is reasonably likely to prevail in showing that claims 16–20 are unpatentable.

IV. OTHER GROUNDS

Because Petitioner has shown a reasonable likelihood of prevailing with respect to claims 8–15 based on obviousness over Prusik, and claims 1, 4–7, and 16–20 based on obviousness over Prusik and Vaillant, we will institute on all claims and all grounds raised in the Petition. 37 C.F.R. § 42.108(a) (“When instituting . . . 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.”); *see SAS Institute Inc. v. Iancu*, 138 S. Ct. 1348, 1359–60 (2018).

V. CONCLUSION

We determine that there is a reasonable likelihood that Petitioner would prevail with respect to at least one of the claims challenged in the Petition, and we institute *inter partes* review.

VI. ORDER

In consideration of the foregoing, it is hereby

ORDERED that, pursuant to 35 U.S.C. § 314(a), *inter partes* review of all challenged claims of the ’818 patent is instituted on all grounds of unpatentability set forth in the Petition; and

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

IPR2024-00932
Patent 11,392,818 B2

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