Trials@uspto.gov
571-272-7822

Paper 8
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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

PHILIPS ELECTRONICS NORTH AMERICA CORP. and
KONINKLIJKE PHILIPS N.V.,
Petitioners,

v.

ILUMISYS, INC.,
Patent Owner.

Case IPR2014-01120
Patent 8,382,327 B2

Before HOWARD B. BLANKENSHIP, BRYAN F. MOORE, and BARBARA A. BENOIT, *Administrative Patent Judges*.

MOORE, *Administrative Patent Judge*.

DECISION
Institution of *Inter Partes* Review
37 C.F.R. § 42.108

I. INTRODUCTION

Philips Electronics North America Corp. and Koninklijke Philips N.V. ("Petitioners") filed a Petition, on July 3, 2014, requesting an *inter partes* review of claims 1–3, 7–9, and 13–16 ("challenged claims") of U.S. Patent No. 8,382,327 B2 (Ex. 1001, "the '327 patent"). Paper 1 ("Pet."). Ilumisys, Inc. ("Patent Owner") did not file a Preliminary Response. We have jurisdiction under 35 U.S.C. § 314.

The standard for instituting an *inter partes* review is set forth in 35 U.S.C. § 314(a), which provides as follows:

> THRESHOLD.—The Director may not authorize an inter partes review to be instituted unless the Director determines that the information presented in the petition filed under section 311 and any response filed under section 313 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.

Pursuant to 35 U.S.C. § 314, the Patent Trial and Appeal Board ("Board") finds a reasonable likelihood that Petitioners would prevail with respect to claims 1–3, 7–9, and 13–16 of the '327 patent and, thus, authorizes an *inter partes* review to be instituted as to those claims.

A. Related Proceedings

Petitioners indicate that the '327 patent is involved in co-pending *Ilumisys, LLC d/b/a Toggled v. Philips Electronics North America Corp., LLC*, No. 3:13-CV-14961 (E.D. Mich.). Pet. 3. Petitioners also indicate that the '327 patent was involved in several other actions, each of which is terminated. *Id.* Patents related to the '327 are involved in *inter partes* reviews IPR2014-00448, IPR2014-00710, and IPR2014-01333.

B. The '327 Patent

The '327 patent is directed to replacement light sources that incorporate Light Emitting Diodes ("LEDs") and replace conventional lamps, such as fluorescent lamps and incandescent light bulbs. Ex. 1001, col. 2, ll. 22–36, 61–63. Specifically, a light tube for replacing fluorescent tubes includes a bulb portion and a pair of end caps, which are disposed at opposite ends of the bulb portion. *Id.* A plurality of LEDs are mounted on a surface inside the bulb portion of the light turbe and are in electrical communication with a pair of end caps. *Id*. The invention includes a replacement light source that confines light output of the light source to less than about 180° via sidewalls which extend to a height above the mounting surface. *Id.* at claims 1, 8, and 16.

C. Illustrative Claim

Of the challenged claims, 1, 8, and 16 are independent. Claim 1 is illustrative of the claimed subject matter of the '327 patent and is reproduced below:

> 1. A light device for illumination by a power supply circuit comprising:
>
> a bulb portion,
>
> a pair of end caps disposed at opposite ends of the bulb portion, the pair of end caps including a first end cap disposed at one end of the bulb portion, and a second end cap disposed at an end of bulb portion opposite the first end cap, wherein the bulb portion and the pair of end caps are dimensioned to be mounted in a fluorescent light tube socket; and
>
> a plurality of light emitting diodes disposed inside the bulb portion along one surface of a circuit board extending between the first end cap and the second end cap for illuminating in response to electrical current to be received from the power supply circuit; wherein each of

> the plurality of light emitting diodes is mounted with respect to surface of the circuit board to establish a radiation pattern of light emitted from the bulb portion; and
>
> wherein the arrangement of the circuit board and the bulb portion is such that substantially the entire light output of the light device is emitted away from the one surface and is confined to an included angle by sidewalls extending to a height above the one surface on opposing sides of the plurality of light emitting diodes between the first end cap and the second end cap.

Ex. 1001, 14, col. 5, l. 52 – col. 6, l. 10.

D. Prior Art Relied Upon

Petitioners rely upon the following prior art references (Pet. 6–7):

Applicant	**Patent No.**	**Effective Date**	**Exhibit Number**
InfoSystems GmbH, ("DE 320")	DE 299 00 320 U1	May 12, 1999	Ex. 1002/1003[1]
Morgan et al. ("Morgan")	US 2003/0076281 A1	June 15, 1999	Ex. 1005
Nireco Co., Ltd. ("JP '677")	JP 08-162677	June 21, 1996	Ex. 1006/1007[2]
Matsubishi Cable Industries, Ltd. ("JP '536")	JP H10-308536	Nov. 17, 1998	Ex. 1009/1010[3]
Matsushita Electric Works, Co., Ltd. ("JP '234")	JP 11-162234	June 18, 1999	Ex. 1012/1013[4]
Popovich et al. ("Popovich,")	US 6,582,103 B1	July 20, 2000	Ex. 1016

[1] English Translation which is cited by the Petitioner. *See* Pet. 6–7.
[2] English Translation which is cited by the Petitioner. *See* Pet. 6–7.
[3] English Translation which is cited by the Petitioner. *See* Pet. 6–7.
[4] English Translation which is cited by the Petitioner. *See* Pet. 6–7.

E. The Asserted Grounds

Petitioners assert that the challenged claims are unpatentable based on the following grounds (Pet. 7):

Reference[s]	**Basis**	**Claims challenged**
JP ’677 and JP ’536	§ 103	1, 2, 7, 8, and 13–16
JP ’677, JP ’536, and JP ’234	§ 103	3 and 9
JP ’234 and Popovich	§ 103	1–3, 7–9, and 13–16
JP ’234 and JP ’536	§ 103	1–3, 7–9, and 13–16
DE ’320 and Morgan	§ 103	1, 2, 7, 8, 13, 14, and 16
DE ’320, Morgan and JP ’234	§ 103	3 and 9

II. ANALYSIS

A. Claim Construction

In an *inter partes* review, claim terms in an unexpired patent are given their broadest reasonable construction in light of the Specification of the patent in which they appear. 37 C.F.R. § 42.100(b). Under the broadest reasonable construction standard, claim terms “are . . . given their ordinary and customary meaning,” as would be understood by one of ordinary skill in the art in the context of the entire disclosure. *In re Translogic Tech., Inc.*, 504 F.3d 1249, 1257 (Fed. Cir. 2007) (quoting *Philllips v. AWH Corp.*, 415 F.3d 1303, 1312 (Fed. Cir. 2005) (en banc)). Any special definition for a claim term must be set forth in the Specification with “reasonable clarity, deliberateness, and precision.” *In re Paulsen*, 30 F.3d 1475, 1480 (Fed. Cir. 1994).

Petitioners provide construction for the claim term “support structure.”

Pet. 10. We find that neither "support structure" nor any of the other claim terms recited in the claims need to be construed explicitly at this time.

B. Claims 1, 2, 7, 8, and 13–16—Obviousness over JP '677 (Ex. 1007) and JP '536 (Ex. 1010)

Petitioners argue that claims 1, 2, 7, 8, and 13–16 are unpatentable under 35 U.S.C. § 103(a) over JP '677 and JP '536. Pet. 16–27. JP '677 describes an LED light source that is compatible with existing fluorescent lamps. Ex. 1006 ¶¶ 5, 6, Figs. 1(A) – (C), 3. JP '677 describes a light-transmissive, circular tube with the same dimensions as a linear fluorescent lamp. *Id.* at Figs. 1(A) – (C), 3. JP '677 describes the use of a printed circuit board having LEDs arranged in linear form on a surface. *Id.* ¶ 6, Figs. 1(A), 1(B). The electrical connectors of JP '677 have the same dimensions as connectors of fluorescent lamps. *Id.* ¶¶ 5, 6, Figs. 1(A) – (C), 3. JP '677 describes a voltage smoothing circuit. *Id.* ¶ 14; Figs. 1(A), 2. JP '677 describes supporting material 4 that includes four plates that are on opposing sides of the circuit board 2 and extend vertically from a horizontal plane of the circuit board. *Id.* at Fig. 1(B), ¶¶ 7, 10, 12.

Below we discuss independent claim 1. Claim 1 recites "a bulb portion." Ex. 1001, 14, col. 5, l. 54. Petitioners assert that JP '677's disclosure of a circular tube that includes a transmissive acryl cover or glass cover that allows light from the LEDs 1 to pass through the cover teaches or suggests the recited bulb. Pet. 16 (citing Ex. 1007 ¶ 13, Figs. 1(A), 1(B)). Thus, on the record before us and for purposes of institution, Petitioners have shown sufficiently that JP '677 teaches or suggests this limitation.

In addition, claim 1 recites "a pair of end caps disposed at opposite ends of the bulb portion, the pair of end caps including a first end cap disposed at one end

of the bulb portion, and a second end cap disposed at an end of bulb portion opposite the first end cap, wherein the bulb portion and the pair of end caps are dimensioned to be mounted in a fluorescent light tube socket." Ex. 1001, col. 5, l. 55–61. Petitioners assert that JP '677's disclosure of connections and bases that fit standard florescent bulbs meets this limitation. Pet. 16 (citing Ex. 1007 ¶ 12, Figs. 1(A), 1(B)). Thus, on the record before us and for purposes of institution, Petitioners have shown sufficiently that JP '677 teaches or suggests this limitation.

In addition, claim 1 recites "a plurality of light emitting diodes disposed inside the bulb portion along one surface of a circuit board extending between the first end cap and the second end cap for illuminating in response to electrical current to be received from the power supply circuit." Ex. 1001, 14, col. 5, l. 61–66. Petitioners assert that JP '677's disclosure of the use of Printed Circuit Board ("PCB") 2 having LEDs 1 arranged in linear form meets this limitation. Pet. 17 (citing Ex. 1007 ¶ 12, Figs. 1(A), 1(B)). Petitioners further assert that JP '677's disclosure of an "alternating current source" is applied and a "full wave rectifying circuit" is used so that a current "flows in a large number of light emitting diodes" meets this limitation. Pet. 17 (citing Ex. 1007 ¶ 14, Figs. 1(A), 1(B)). Thus, on the record before us and for purposes of institution, Petitioners have shown sufficiently that the combination of JP '677 teaches or suggests this limitation.

In addition, claim 1 recites "wherein each of the plurality of light emitting diodes is mounted with respect to surface of the circuit board to establish a radiation pattern of light emitted from the bulb portion." Ex. 1001, 14, col. 5, l. 66 – col. 6, l. 3. Petitioners assert that JP '677's disclosure of LEDs mounted on the surface of the printed circuit board within the circular tube that transmits light from the LEDs 1 away from the printed circuit board 2 meets this limitation. JP '677 states "[L]ight emitting diodes 1 are arranged on a printed circuit board 2 with the

mutual distance of one row as the density." Pet. 17 (citing Ex. 1007 ¶ 13, Figs. 1(A), 1(B)). Thus, on the record before us and for purposes of institution, Petitioners have shown sufficiently that JP '677 teaches or suggests this limitation.

In addition, claim 1 recites "wherein the arrangement of the circuit board and the bulb portion is such that substantially the entire light output of the light device is emitted away from the one surface." Ex. 1001, 14, col. 6, l. 4–7. Petitioners assert that JP '677's disclosure of PCB meets this limitation. Pet. 17 (citing Ex. 1007 ¶ 12, Figs. 1(A), 1(B)) It appears that the PCB is attached such that it covers the width of the tube such that the light is directed upward meets this limitation. Figs. 1(A), 1(B); Pet. 17. Thus, on the record before us, Petitioners have shown sufficiently that JP '677 teaches or suggests this limitation.

In addition, claim 1 recites "[substantially the entire light output of the light device] is confined to an included angle by sidewalls extending to a height above the one surface on opposing sides of the plurality of light emitting diodes between the first end cap and the second end cap." Ex. 1001, 14, col. 6, l. 5–10. Petitioners assert that JP '536's disclosure of reflective surfaces that are provided on opposed sides of a surface supporting a linear array of LEDs 21, 22 meets this limitation. Pet. 18 (citing Ex. 1017, Abstract, Figs 3, 4). The reflective surfaces enclose the LEDs 21, 22 and appear to confine the light emitted to an included angle of less than 180º. Ex. 1017, Figs. 3, 4; Pet. 18. Thus, on the record before us and for purposes of institution, Petitioners have shown sufficiently that JP '536 teaches or suggests this limitation. Petitioners also state:

> It would have been obvious to a POSITA to incorporate into JP ['']677 reflectors that extend above a mounting surface for LEDs on opposite sides of the LEDs, such as the reflectors 61 or 63 described by JP ['']536. Ex. 1017 at ¶ 100. For example, the PCB of JP ['']677) could be substituted could be substituted with the base plate10 (FIG. 4 of JP

> ['536) which could be secured between plates 4 of JP ['677 in a similar manner as the PCB 2 of JP ['677 is secured between plates 4. *Id.* Alternatively, for example, reflectors 61 (FIG. 3 of JP ['536) may be incorporated on the PCB 2 of JP ['677 in a manner such as that shown in JP ['536. *Id.* A POSITA would have been motivated to incorporate reflectors as taught by JP [' 536 into JP ['677 to achieve low variability in light output from the light source of JP ['677 as taught by JP ['536. *Id.* at ¶ 101. JP ['677 discloses a desire for uniform brightness from its Led based light source (Ex. 1007 at ¶¶ 0011, 0013) and a POSITA would be motivated to incorporate the reflectors of JP ['536 which also pertains to LED-based light sources, to improve uniformity of the brightness. Ex. 1017 at 101.

Pet. 19–20.

Thus, the Petitioners have provided, for purposes of institution, evidence of sufficient rationale to combine JP '677 and JP '536. Upon review of Petitioners' analysis and supporting evidence, we determine that Petitioners have demonstrated that there is a reasonable likelihood that they would prevail with respect to claim 1 on the ground that this claim would have been obvious over JP '677 and JP '536.

To the extent that a limitation of the challenged claims is not discussed above, Petitioners also provide detailed explanations of how each limitation of claims 1, 2, 7, 8, and 13–16 is taught or suggested by the combination of JP '677 and JP '536. Pet. 16–27. At this time, based on the record before us and for purposes of institution, we are persuaded by these explanations. Upon review of Petitioners' analysis and supporting evidence, we determine that Petitioners have demonstrated that there is a reasonable likelihood that they would prevail with respect to claims 1, 2, 7, 8, and 13–16 on the ground that these claims would have been obvious over JP '677 and JP '536.

C. Claims 3 and 9—Obviousness over JP '677, JP '536, and JP '234 (Ex. 1014)

Petitioners argue that claims 3 and 9 are unpatentable under 35 U.S.C. § 103(a) over JP '677, JP '536, and JP '234. Pet. 27–28. JP '234 describes a LED light source having a number of light emitting diode elements arranged in a cylindrical tube that has the same form and dimensions as a ready-made fluorescent lamp. Ex. 1003 ¶ 25, FIG. 5. The LED light source of JP '234 contains bases at each end of the tube that can be attached and detached in a standard fluorescent light socket. *Id.* The LED light source of JP '234 has a pair of terminal pins at the bases of each end of the tube. *Id.* The LED light source of JP '234 is equipped with a power supply circuit that receives output from a starting circuit (of a conventional fluorescent light fixture) for starting stably the LEDs while suppressing overvoltage to the LEDs and overcurrent. *Id.* ¶ 9; FIGS. 6, 7. The power supply circuit of JP '234 includes a rectifying circuit to enable use with direct current as well as alternating current. *Id.* ¶ 10; FIGS. 6, 7. JP '234 describes a switching circuit that utilizes high-frequency ON and OFF control techniques and that may be included in the power supply circuit. *Id.* ¶¶27, 28; FIG. 7. JP '234 states that the power supply circuit may include light modulation that makes it possible to control the starting state of one or more groups of LEDs. *Id.* ¶ 24; FIG. 4. JP '234 describes using white LEDs. *Id.* ¶ 29.

Claims 3 and 9 depend from claim 1 and 8. We discuss above in section II. D. how Petitioners have shown sufficiently how JP '677 and JP '536 meet the limitations of claims 1 and 8 and the rationale for combining them. Here we discuss the additional limitations of claims 3 and 9 and the rationale for combining JP '677 and JP '234. Claims 3 and 9 recite that each of the plurality of LEDs is a white LED. Ex. 1001, 14, col. 6, ll. 13–14, 45–47. Petitioners assert, as noted

above, JP ’234 describes using white LEDs. Pet. 27–28 (citing Ex. 1012, 4). For the purpose of this decision, we are persuaded by this assertion. On the record before us and for purposes of institution, Petitioners have shown sufficiently that JP ’234 teaches or suggests this limitation.

Petitioners also argue that JP ’677 and JP ’234 are from the same area of technology and field (LED-based replacements for fluorescent lamps) and that JP ’677 teaches that it is compatible with existing fluorescent lamps such that a person of ordinary skill in the art would be motivated to use JP ’677 with white LEDs in applications that call for white LEDs. Pet. 28 (citing Ex. 1017 ¶ 107). Thus, Petitioners have provided, for purposes of institution, evidence of sufficient rationale to combine of JP ’677, JP ’536 and JP ’234. Upon review of Petitioners’ analysis and supporting evidence, we determine that Petitioners have demonstrated that there is a reasonable likelihood that they would prevail with respect to claims 3 and 9 on the ground that these claims would have been obvious over JP ’677, JP ’536, and JP ’234.

D. Claims 1, 2, 7, 8, 13, 14, and 16 – Obviousness over DE ’320 (Ex. 1003) and Morgan (Ex. 1005)

Petitioners argue that independent claims 1, 2, 7, 8, 13, 14, and 16 are unpatentable under 35 U.S.C. § 103(a) over DE ’320 and Morgan. Pet. 38. DE ’320 discloses an LED light source that is “a replacement for an existing fluorescent lamp.” Ex. 1003, 3, ll. 11–15; Figs. 1–7. DE ’320 discloses that the LED light source “substantially corresponds, with regard to the external dimensions as well as the layout and the size or geometry of the electrical terminals for the illumination means, to a conventional fluorescent lamp.” *Id.* at 4, ll. 3–8. DE ’320 discloses LEDs 6 arranged in rows along the length of circuit

board 7 that extends substantially the length of the LED light source. *Id.* at 8, ll. 26–31, 6, ll. 8–11, 9, ll. 13–17; Figs. 1–3. DE '320 discloses male bi-pin connectors 9, 9', 10, 10' with the same dimensions as connectors of fluorescent lamps. *Id.* at 10, ll. 19–30; Figs. 1–6. DE '320 discloses reflector 8 that is provided on opposed sides of, and extends above, LEDs 6 and circuit board 7. Reflector 8 has "a polished surface in order to enhance the reflection of light emitted by the light-emitting diodes." *Id.* at 9, ll. 28–30; Figs. 1–8b. DE '320 discloses "switching means in order to switch the light-emitting diodes . . . on or off either individually, in pairs or in groups . . . to adapt the light level of the illumination device . . . ." *Id.* at 5, l. 27 – 6, l. 3. Morgan discloses translucent member 1002 that may be implemented in cylindrical housing 1007 provided around LEDs 1001 to provide uniformity of light distribution. Ex. 1005 ¶¶ 261, 262; Figs. 101A–102.

Below we discuss independent claim 1. Claim 1 recites "a bulb portion." Ex. 1001, 14, col. 5, l. 54. Petitioners assert that Morgan's disclosure that a translucent member may be placed over LEDs to provide uniform light distribution meets this limitation. (Pet. 21, 22 (citing Ex. 1005 ¶¶ 261, 262)). The light source of Morgan "may include a substantially cylindrical housing 1007 such that the translucent member is implemented as an elongate translucent member." Pet. 22 (citing Ex. 1005 ¶ 262). Thus, at this time, we are persuaded by this assertion. Thus, on the record before us and for purposes of institution, Petitioners have shown sufficiently that Morgan teaches or suggests this limitation.

In addition, claim 1 recites "a pair of end caps disposed at opposite ends of the bulb portion, the pair of end caps including a first end cap disposed at one end of the bulb portion, and a second end cap disposed at an end of bulb portion opposite the first end cap, wherein the bulb portion and the pair of end caps are

dimensioned to be mounted in a fluorescent light tube socket." Ex. 1001, 14, col. 5, l. 55–61. Petitioners assert that DE '320's disclosure of end pieces 13 that include terminal bi-pins 9, 9', 10, and 10' meets this limitation. Pet. 46–47 (citing Ex. 1003, 10, ll. 19–30, Figs. 5 & 6). End pieces 13 are described as being on opposite sides of lamp 2 and as having bi-pins 9, 9', 10, and 10' that are compatible with florescent lamp sockets. Ex. 1003, 10, ll. 19–30. Thus, on the record before us and for purposes of institution, Petitioners have shown sufficiently that DE '320 teaches or suggests this limitation.

In addition, claim 1 recites "a plurality of light emitting diodes disposed inside the bulb portion along one surface of a circuit board extending between the first end cap and the second end cap for illuminating in response to electrical current to be received from the power supply circuit." Ex. 1001, 14, col. 5, l. 52 – col. 6, l. 10. Petitioners assert that DE '320's disclosure of LEDs mounted on a PCB with end caps and a switching means that switches power to effectuate adjustment of the device's light level meets this limitation. (Pet. 47 (citing Ex. 1003, 8, ll. 11–20, 9, ll. 23–28, 11, ll. 11–16, 5, ll. 27–30)). Thus, on the record before us and for purposes of institution, Petitioners have shown sufficiently that DE '320 teaches or suggests this limitation.

In addition, claim 1 recites "wherein each of the plurality of light emitting diodes is mounted with respect to surface of the circuit board to establish a radiation pattern of light emitted from the bulb portion." Ex. 1001, 14, col. 5, l. 52 – col. 6, l. 10. Petitioners assert that DE '320's disclosure of U-shaped reflector 8, which includes surfaces on opposite sides of the circuit board 7 that extend above the circuit board 7 in the light emitting direction meets this limitation. Pet. 47–48 (citing Ex. 1003, 8, ll. 28–31, 6, ll. 8–11, Fig. 7). Thus, on the record before us and

for purposes of institution, Petitioners have shown sufficiently that DE '320 teaches or suggests this limitation.

In addition, claim 1 recites "wherein the arrangement of the circuit board and the bulb portion is such that substantially the entire light output of the light device is emitted away from the one surface and is confined to an included angle by sidewalls extending to a height above the one surface on opposing sides of the plurality of light emitting diodes between the first end cap and the second end cap." Ex. 1001, 14, col. 6, l. 5–10. Petitioners assert that DE '320's disclosure of U-shaped reflector 8, which includes surfaces on opposite sides of the circuit board 7 that extend above the circuit board 7 in the light emitting direction meets this limitation. Pet. 48 (citing Ex. 1003, 8, ll. 28–31, 9, ll. 28–30, Fig. 8b). U-shaped reflector 8 encloses LEDs 6 and appears to confine the light emitted to an included angle of less than 180º. Pet. 48; Ex. 1003, Figs. 3, 7. Thus, on the record before us and for purposes of institution, Petitioners have shown sufficiently that DE '320 teaches or suggests this limitation.

To the extent that a limitation of the challenged claims is not discussed above, Petitioners also provide detailed explanations of how each limitation of claims 1, 2, 7, 8, 13, 14, 16 is taught or suggested by the combination of DE '320 and Morgan. Pet. 45–59. At this time, based on the record before us and for purposes of institution, we are persuaded by these explanations. Petitioners also assert that:

> It would have been obvious to a POSITA to incorporate a cylindrical bulb around the circuit board 7, LEDs 6, and reflector 8 of the illumination device of DE ['']320, such as the translucent bulb 1007 described by [Morgan]. Ex. 1017 at ¶ 139. One would have been motivated to incorporate the substantially cylindrical housing to achieve the predictable result of uniform illumination from the DE ['']320 illumination device as described by [Morgan]. *Id*. Moreover,

> the description of DE [']320 provides motivation for incorporating the bulb as it describes that the light source "substantially corresponds, with regard to the external dimensions … to the external dimensions of a conventional fluorescent lamp…" Ex. 1003 at p. 4, ll. 4-8. Ex. 1017 at ¶ 139. A POSITA would be motivated by such teachings to incorporate a cylindrical housing to have the light source further correspond to a conventional fluorescent lamp. Ex. 1017 . . . ¶ 139. As further motivation, one use for the illumination device as described by DE [']320 is for illuminating an information display. *Id.* at p. 12, ll. 9-12. A POSITA would be motivated to provide uniform illumination (as described by [Morgan]) for an information display to ensure even illumination of the display while minimizing any bright spots. Ex. 1017 at ¶ 139.

Id. at 50–51. Thus, Petitioners, and for purposes of institution, have provided evidence of sufficient rationale to combine DE '320 and Morgan. Upon review of Petitioners' analysis and supporting evidence, we determine that Petitioners have demonstrated that there is a reasonable likelihood that they would prevail with respect to claims 1, 2, 7, 8, 13, 14, and 16 on the ground that these claims would have been obvious over DE '320 and Morgan.

E. Claims 3 and 9—Obviousness over DE '320, Morgan, and JP '234

Petitioners argue that claims 3 and 9 are unpatentable under 35 U.S.C. § 103(a) over DE '320, Morgan, and JP '234. Pet. 59-60.

Claims 3 and 9 depend from claim 1 and 8. We discuss above in section II. D. how Petitioners have shown sufficiently how DE '320 and Morgan meet the limitations of claims 1 and 8 and the rationale for combining them. Here, we discuss the additional limitations of claims 3 and 9 and the rationale for combining DE '320 and JP '234. Claims 3 and 9 recite that each of the plurality of LEDs is a white LED. Ex. 1001, 14, col. 6, ll. 13–14, 45–47. Petitioners assert, as noted above, JP '234 describes using white LEDs. Pet. 27–28 (citing Ex. 1012, 4). For

the purpose of this decision, we are persuaded by this assertion. On the record before us, Petitioners have shown sufficiently that JP '234 teaches or suggests this limitation.

Petitioners also argue that DE '320 and JP '234 are from the same area of technology and field (LED-based replacements for fluorescent lamps) and that DE '320 teaches that it is replacement for existing fluorescent lamps such that a person of ordinary skill in the art would be motivated to use DE '320 with white LEDs in applications that call for white LEDs. Pet. 28 (citing Ex. 1017 ¶ 107). Thus, Petitioners have provided, for purposes of institution, evidence of sufficient rationale to combine of DE '320, Morgan, and JP '234. Upon review of Petitioners' analysis and supporting evidence, we determine that Petitioner has demonstrated that there is a reasonable likelihood that they would prevail with respect to claims 3 and 9 on the ground that these claims would have been obvious over DE '320, Morgan, and JP '234.

F. Other Asserted Grounds

Petitioners argue that claims 1–3, 7–9, and 13–16 are unpatentable under 35 U.S.C. § 103(a) over JP '234 and Popovich (Pet. 28–40) and that claims 1–3, 7–9, and 13–16 are unpatentable under 35 U.S.C. § 103(a) over JP '234 and JP '536 (Pet. 40–45).

The Board has discretion whether to institute a review. *See* 35 U.S.C. § 314(a) (indicating an *inter partes* review may not be instituted *unless* a determination is made that there is a reasonable likelihood that the petitioner would prevail). Thus, in light of the determination that there is a reasonable likelihood that those same challenged claims are unpatentable based on the grounds of unpatentability on which we institute an *inter partes* review, we exercise our

discretion and do not institute a review based on these other asserted grounds for reasons of administrative efficiency. *See* 37 C.F.R. § 42.108(a).

III. CONCLUSION

For the foregoing reasons, we determine that the information presented in the Petition establishes that there is a reasonable likelihood that Petitioners would prevail with respect to claims 1–3, 7–9, and 13–16 of the '327 patent.

Any discussion of facts in this Decision are made only for the purposes of institution and are not dispositive of any issue related to any ground on which we institute review. The Board has not made a final determination on the patentability of any challenged claims. The Board's final determination will be based on the record as fully developed during trial.

IV. ORDER

Accordingly, it is

ORDERED that pursuant to 35 U.S.C. § 314, an *inter partes* review is hereby instituted as to claims 1–3, 7–9, and 13–16 of the '327 patent for the following grounds:

1. claims 1, 2,7, 8, and 13–16 are unpatentable under 35 U.S.C. § 103 over JP '677 and JP '536;
2. claims 3 and 9 are unpatentable under 35 U.S.C. § 103 over JP '677, JP '536, and JP '234;
3. claims 1, 2,7, 8,13, 14, and 16 are unpatentable under 35 U.S.C. § 103 over DE '320 and Morgan;
4. claims 3 and 9 are unpatentable under 35 U.S.C. § 103 over DE '320, Morgan, and JP '234;

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

FURTHER ORDERED that the trial is limited to the grounds identified above and no other grounds are authorized.

PETITIONERS:

John Salazar
jsalazar@middletonlaw.com

Scott Higdon
shigdon@middletonlaw.com

Robert Theuerkauf
rtheuerkauf@middletonlaw.com

PATENT OWNER:

Chris Bowley
ccb@fr.com

Nadine Mustafa
mustafa@youngbasile.com