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Paper 14
Date: November 10, 2021

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

SATCO PRODUCTS, INC.,
Petitioner,

v.

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA,
Patent Owner.

IPR2021-00794
Patent 10,593,854 B1

Before JENNIFER S. BISK, CHRISTOPHER L. CRUMBLEY, and STEVEN M. AMUNDSON, *Administrative Patent Judges*.

Opinion for the Board filed by *Administrative Patent Judge* AMUNDSON.

Opinion Concurring filed by *Administrative Patent Judge* CRUMBLEY.

AMUNDSON, *Administrative Patent Judge*.

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

I. INTRODUCTION

Satco Products, Inc. ("Petitioner") filed a Petition requesting an *inter partes* review of claims 1–6 in U.S. Patent No. 10,593,854 B1 (Exhibit 1001, "the '854 patent") under 35 U.S.C. §§ 311–319. Paper 2 ("Pet."). The Regents of the University of California ("Patent Owner") filed a Preliminary Response. Paper 8 ("Prelim. Resp."). Further, after receiving Board authorization, Petitioner filed a Preliminary Reply, and Patent Owner filed a Preliminary Sur-reply. Paper 12 ("Prelim. Reply"); Paper 13 ("Prelim. Sur-reply").

Under 37 C.F.R. § 42.4(a), we have authority to determine whether to institute an *inter partes* review. We may institute an *inter partes* review only if "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." 35 U.S.C. § 314(a) (2018).

But we have discretion to deny a petition even when a petitioner satisfies the "reasonable likelihood" threshold standard for instituting trial. *See, e.g.*, *Cuozzo Speed Techs., LLC v. Lee*, 136 S. Ct. 2131, 2140 (2016) ("[T]he agency's decision to deny a petition is a matter committed to the Patent Office's discretion."). Based on the current record and for the reasons explained below, we exercise our discretion under 35 U.S.C. § 314(a) to deny institution of an *inter partes* review.

II. BACKGROUND

A. Real Parties in Interest

Petitioner identifies itself as the real party in interest. Pet. 2. Patent Owner identifies itself as the real party in interest. Paper 3, 2; Paper 9, 2. The parties do not raise any issue about real parties in interest.

B. Related Matters

Petitioner and Patent Owner identify the following civil actions as related matters:

- *Seoul Semiconductor Co., Ltd. et al. v. K-Mart Corp.*, No. 2:16-cv-06782 (C.D. Cal.);
- *The Regents of the University of California v. Walmart Inc.*, No. 2:19-cv-06570 (C.D. Cal.);
- *The Regents of the University of California v. Amazon.com, Inc. et al.*, No. 2:19-cv-06571 (C.D. Cal.);
- *The Regents of the University of California v. Target Corp.*, No. 2:19-cv-06572 (C.D. Cal.);
- *The Regents of the University of California v. Ikea of Sweden AB et al.*, No. 2:19-cv-06573 (C.D. Cal.);
- *The Regents of the University of California v. General Electric Co.*, No. 2:19-cv-10792 (C.D. Cal.);
- *Satco Products, Inc. v. The Regents of the University of California*, No. 2:19-cv-06444 (E.D.N.Y.);
- *Satco Products, Inc. v. The Regents of the University of California*, No. 2:20-cv-04965 (E.D.N.Y.) (the "E.D.N.Y. case"); and
- *The Regents of the University of California v. The Home Depot, Inc.*, No. 2:20-cv-07943 (C.D. Cal.).

Pet. 3–4; Paper 3, 2–3; Paper 9, 2–3.

Petitioner and Patent Owner identify the following Board proceedings as related matters:

- *Satco Products, Inc. v. The Regents of the University of California*, IPR2020-00579 (Patent 7,781,789);
- *Satco Products, Inc. v. The Regents of the University of California*, IPR2020-00695 (Patent 9,240,529);
- *Satco Products, Inc. v. The Regents of the University of Californi*a, IPR2020-00780 (Patent 10,217,916);
- *Satco Products, Inc. v. The Regents of the University of California*, IPR2020-00813 (Patent 9,859,464);
- *General Electric Co. et al. v. The Regents of the University of California*, IPR2020-01456 (Patent 7,781,789);
- *General Electric Co. et al. v. The Regents of the University of California*, IPR2020-01457 (Patent 9,240,529);
- *General Electric Co. et al. v. The Regents of the University of California*, IPR2020-01458 (Patent 9,859,464);
- *General Electric Co. et al. v. The Regents of the University of California*, IPR2020-01459 (Patent 10,217,916);
- *Satco Products, Inc. v. The Regents of the University of California*, IPR2021-00661 (Patent 10,658,557); and
- *Satco Products, Inc. v. The Regents of the University of California*, IPR2021-00662 (Patent 10,644,213).

Pet. 2–3; Paper 3, 3–4; Paper 9, 3–4.

Petitioner and Patent Owner identify the following International Trade Commission (ITC) investigations as related matters:

- *Certain Filament Light-Emitting Diodes and Products Containing Same*, No. 337-TA-1172 (ITC) (the "1172 investigation"); and
- *Certain Filament Light-Emitting Diodes and Products Containing Same (II)*, No. 337-TA-1220 (ITC) (the "1220 investigation").

Pet. 3; Paper 3, 2–3; Paper 9, 2–3.

Additionally, Patent Owner identifies two pending applications as related matters, i.e., application no. 16/828,585 (filed on March 24, 2020) and application no. 17/109,754 (filed on December 2, 2020). Paper 9, 4.

C. The '854 Patent (Exhibit 1001)

The '854 patent, titled "Transparent Light Emitting Device with Light Emitting Diodes," issued on March 17, 2020, from an application filed on September 13, 2019. Ex. 1001, codes (22), (45), (54). The patent identifies that application as the last in a series of continuation applications that started with application no. 11/954,154 ("the '154 application") filed on December 11, 2007. *Id.* at 1:7–50, code (63). Further, the patent claims priority to provisional application no. 60/869,447 ("the '447 provisional") filed on December 11, 2006. *Id.* at 1:45–54, code (60). The patent also incorporates by reference the '447 provisional. *Id.* at 1:51–56.

The '854 patent explains that "[i]n conventional LEDs, in order to increase the light output power from the front side of the LED, the emitt[ed] light is reflected by the mirror on the backside of the sapphire substrate or the mirror coating on the lead frame." Ex. 1001, 10:64–67; *see id.* at 8:31–36. But an LED's emitting layer (active region) may reabsorb reflected light because the photon energy in the light "is almost same as the band-gap energy" of the LED's emitting layer. *Id.* at 11:3–6; *see id.* at

8:37–40. Reabsorption by the LED's emitting layer decreases the LED's "efficiency or output power." *Id.* at 11:6–8; *see id.* at 8:40–42.

To address that deficiency, the '854 patent discloses minimizing internal reflections within an LED by eliminating mirrors and/or mirrored surfaces and minimizing reabsorption of light by the active region. Ex. 1001, 9:15–18. The patent explains that the invention concerns "a light emitting device comprised of a plurality of III-nitride layers" with "an active region that emits light, wherein all of the layers except for the active region are transparent for an emission wavelength of the light, such that the light is extracted effectively through all of the layers and in multiple directions through the layers." *Id.* at 8:53–59, 11:51–57, 20:60–63, code (57). The patent discloses a lead frame supporting a transparent plate and the III-nitride layers residing on the transparent plate, such that "the light emitted from the III-nitride layers is transmitted through the transparent plate in the lead frame." *Id.* at 9:4–8. The patent also discloses several LED structures "according to the preferred embodiment of the present invention." *See, e.g.*, *id.* at 9:47–10:36, Figs. 4–22.

Figures 8A and 8B in the ’854 patent (reproduced below) depict an LED structure “according to the preferred embodiment of the present invention”:

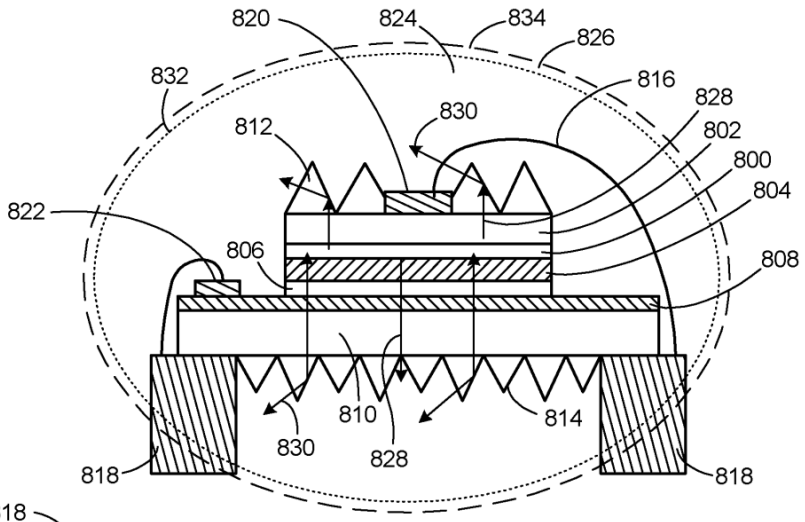

FIG. 8A

FIG. 8B

Figures 8A and 8B illustrate an LED including “an emitting layer 800, an n-type GaN [gallium nitride] layer 802, a p-type GaN layer 804, a first ITO [indium tin oxide] layer 806, a second ITO layer 808, and a glass layer 810.” Ex. 1001, 13:65–14:3, Figs. 8A–8B; *see id.* at 9:59–61. The LED “is wire bonded 816 to a lead frame or sub-mount 818 using the bonding pads 820, 822.” *Id.* at 14:7–9, Fig. 8A. Figure 8B shows a top view of “the lead frame 818.” *Id.* at 14:36–37, Fig. 8B.

“The n-type GaN layer 802 has a surface 812 that is roughened, textured, patterned or shaped (e.g., a cone shape surface), and the glass layer 810 has a surface 814 that is roughened, textured, patterned or shaped (e.g., a cone shape surface).” Ex. 1001, 14:3–7, Fig. 8A. A roughened,

textured, patterned, or shaped surface enhances light extraction. *Id.* at 8:59–61, 9:25–27, 11:57–59, code (57).

Figure 8A shows the LED embedded in spherically shaped optical element 824 "made of epoxy or glass, forming, for example, a lens." Ex. 1001, 14:10–12, 14:20–26, Fig. 8A. "The shaped optical element 824 may include a phosphor layer 826, which may be remote from the LED, that is roughened, textured, patterned or shaped, for example, on an outer surface of the shaped optical element 824." *Id.* at 14:12–17. Placing phosphor layer 826 on or near the outer surface of shaped optical element 824 increases the conversion efficiency of blue light to white light by reducing the reabsorption of back-scattered light, i.e., light scattered by phosphor layer 826. *Id.* at 14:27–32. Further, "if the surface 834 of the phosphor layer 826 is roughened, textured, patterned or shaped, light extraction is again increased." *Id.* at 14:32–34.

Figures 10A and 10B in the ’854 patent (reproduced below) depict an LED structure “according to the preferred embodiment of the present invention”:

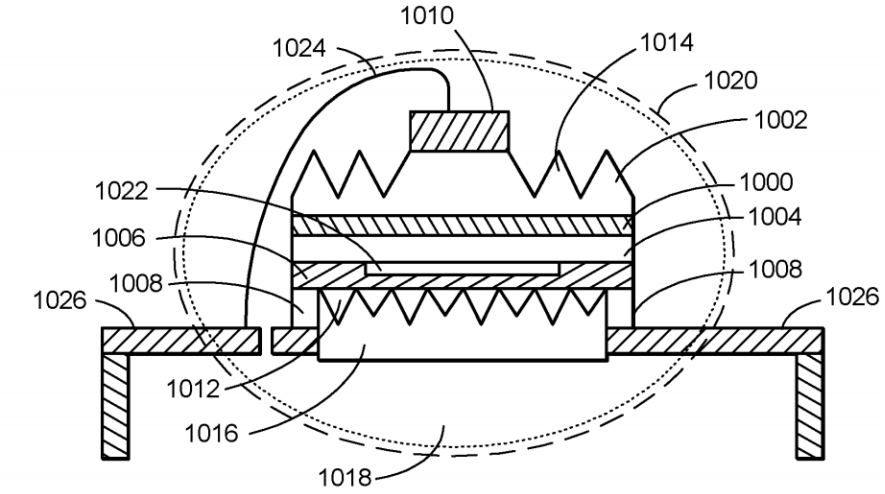

FIG. 10A

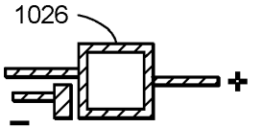

FIG. 10B

Figures 10A and 10B illustrate an LED including “an InGaN [indium gallium nitride] MQW [multiple quantum well] emitting layer 1000, an n-type GaN layer 1002, a p-type GaN layer 1004, an ITO layer 1006, a bonding pad 1008, an ohmic contact/bonding pad 1010,” and “a current spreading layer 1022.” Ex. 1001, 14:60–66, 15:11–12, Figs. 10A–10B; *see id.* at 9:65–67. The LED “is wire bonded 1024 to a lead frame 1026.” *Id.* at 15:16–17, Fig. 10A. Figure 10B “shows a top view of the lead frame 1026.” *Id.* at 15:17, Fig. 10B.

Surface 1012 of ITO layer 1006 “is roughened, textured, patterned or shaped,” and epoxy layer 1016 “is deposited on the surface 1012.” Ex. 1002, 14:66–67, 15:2–3, Fig. 10A. Surface 1014 of n-type GaN layer

1002 "is roughened, textured, patterned or shaped." *Id.* at 14:67–15:2, Fig. 10A.

Figure 10A shows the LED embedded in spherically shaped optical element 1018 "made of epoxy or glass, forming, for example, a lens." Ex. 1001, 15:3–6, Fig. 10A. "The shaped optical element 1018 may include a phosphor layer 1020, which may be remote from the LED, that is roughened, textured, patterned or shaped, for example, on an outer surface of the shaped optical element 1018." *Id.* at 15:6–10.

Figures 22A and 22B in the '854 patent (reproduced below) depict an LED structure "according to the preferred embodiment of the present invention":

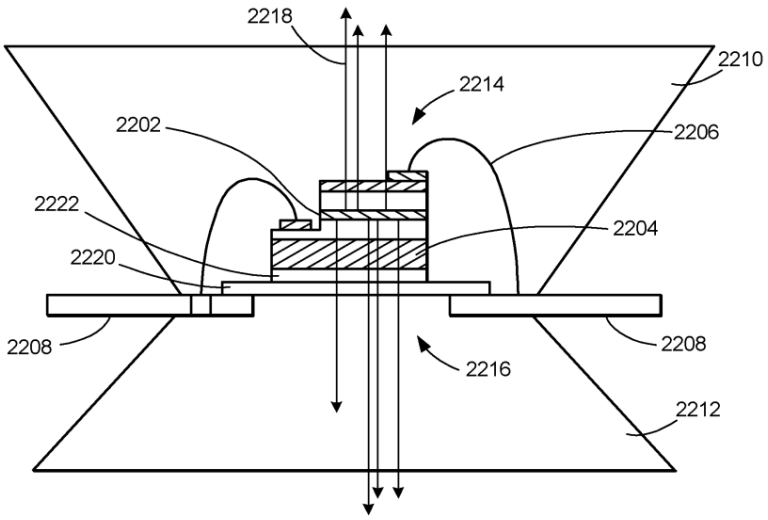

FIG. 22A

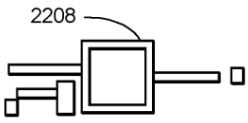

FIG. 22B

Figures 22A and 22B illustrate an LED including "an emitting layer 2202 and a substrate 2204 (as well as other layers)." Ex. 1001, 20:34–38,

Figs. 22A–22B; *see id.* at 10:34–36. The LED "is wire bonded 2206 to a lead frame 2208." *Id.* at 20:38–39, Fig. 22A. Figure 22B "shows a top view of the lead frame 2208." *Id.* at 20:39–40, Fig. 22B.

Figure 22A shows the LED "embedded in or combined with moldings or shaped optical elements 2210, 2212, such as inverted cone shapes made of epoxy or glass, forming, for example, lenses." Ex. 1001, 20:41–44, Fig. 22A. The "shaped optical elements 2210, 2212 are formed on opposite sides, e.g., the top/front side 2214 and bottom/back side 2216 of the LED 2200, wherein the emitting layer 2200 emits light 2218 that is extracted from both the top/front side 2214 and bottom/back side 2216 of the LED 2200." *Id.* at 20:44–49.

"The lead frame 2208 includes a transparent plate 2220." Ex. 1001, 20:50, Fig. 22A. "The transparent plate 2220 may be comprised of glass, quartz, sapphire, diamond or other material transparent for the desired emission wavelength" so that "the transparent glass plate 2220 effectively extracts the light 2218 emitted from" the LED "to the shaped optical element 2212." *Id.* at 20:53–58. The LED "is bonded to the transparent plate 2220 using a transparent/clear epoxy 2222 as a die-bonding material." *Id.* at 20:51–53, Fig. 22A.

D. The Challenged Claims

Petitioner challenges every claim in the '854 patent, i.e., independent claim 1 and claims 2–6 that depend directly from claim 1. *See* Pet. 6–7, 38–89. Claim 1 exemplifies the challenged claims and reads as follows (with formatting added for clarity):

> 1. A light emitting device, comprising:
>
> a transparent surface,

> a cathode on a first end of the transparent surface and an anode on a second end of the transparent surface,
>
> wherein the cathode and anode provide structural support to the transparent surface and are adapted to provide an electrical connection between the light emitting device and a structure outside the light emitting device;
>
> at least one III-nitride light emitting diode (LED) comprising a sapphire growth substrate, the LED in mechanical communication with the transparent surface, and
>
> the LED and transparent surface configured to extract light emitted by the LED through the transparent surface; and
>
> a molding comprising a phosphor and surrounding the LED, the molding configured to extract light from both a front side of the light emitting device and a back side of the light emitting device.

Ex. 1001, 22:2–18.

Claim 2 depends from claim 1 and specifies that "the sapphire growth substrate is a patterned sapphire substrate (PSS)." Ex. 1001, 22:19–21. Claims 3–6 depend from claim 1 and specify properties of "the transparent surface," e.g., that it comprises "glass," "quartz," or "diamond." *Id.* at 22:22–30.

E. The Asserted References

For its challenges, Petitioner relies on the following references:

Name	Reference	Exhibit
Nakamura-959	US 2008/0149959 A1, published June 26, 2008 (application filed December 11, 2007)	1004
Nakamura-949	US 2008/0149949 A1, published June 26, 2008 (application filed December 11, 2007)	1005
Tanda	US 2007/0139949 A1, published June 21, 2007 (application filed December 14, 2006)	1006
Yamazaki	JP 2003-249692, published September 5, 2003	1007

Name	Reference	Exhibit
Schubert	*Light-Emitting Diodes* (1st ed. 2003)	1008
Uemura	US 6,310,364 B1, issued October 30, 2001	1009
Han	KR 10-0626365, published September 20, 2006	1010
Feldman	US 6,666,567 B1, issued December 23, 2003	1011
Tadatomo	"High Output Power Near-Ultraviolet and Violet Light-Emitting Diodes Fabricated on Patterned Sapphire Substrates Using Metalorganic Vapor Phase Epitaxy," Vol. 5187 *Proceedings of SPIE–The International Society for Optical Engineering* 243–49 (2004)	1012

Petitioner contends that the '854 patent "cannot claim a filing date earlier than its actual filing date" of September 13, 2019, and "is thus subject to the provisions of" the America Invents Act (AIA).[1] Pet. 2; *see id.* at 3, 23. Petitioner contends that Nakamura-959 and Nakamura-949 "qualify as prior art under the AIA." *Id.* at 7; *see id.* at 23. Petitioner also contends that the other asserted references "qualify as prior art regardless of whether the AIA or pre-AIA statutory scheme applies." *Id.* at 7; *see id.* at 23–24.

Patent Owner contends that Nakamura-959 and Nakamura-949 "do not qualify as prior art." Prelim. Resp. 34–35; *see id.* at 2. Patent Owner also contends that Tanda "does not qualify as prior art." *Id.* at 35; *see id.* at 2. In particular, Patent Owner argues that the '854 patent's earliest ancestor application, i.e., the '154 application (filed on December 11, 2007), and the '447 provisional (filed on December 11, 2006) each support claims 1 and 2 according to § 112's first paragraph. *Id.* at 22–24, 28–30; *see id.* at

[1] The Leahy-Smith America Invents Act, Pub. L. No. 112-29, 125 Stat. 284 (2011).

20–22. At this stage of the proceeding, Patent Owner does not dispute that the other asserted references qualify as prior art. *See id.* at 2, 20–54.

F. The Asserted Challenges to Patentability

Petitioner asserts the following challenges to patentability:

Claim(s) Challenged	35 U.S.C. §	Reference(s)/Basis
1–6	103	Nakamura-959, Nakamura-949
1, 5, 6	102	Tanda
2	103	Tanda, Tadatomo
1, 3, 6	103	Yamazaki, Schubert
2	103	Yamazaki, Schubert, Tadatomo
1, 3, 6	103	Yamazaki, Schubert, Uemura/Han/Feldman
2	103	Yamazaki, Schubert, Uemura/Han/Feldman, Tadatomo

Pet. 6–7, 38–89.

G. Testimonial Evidence

To support its challenges, Petitioner relies on the declaration of Russell D. Dupuis, Ph.D. (Ex. 1035, "Dupuis Decl."). Dr. Dupuis states that "I have been retained on behalf of SATCO Products, Inc. to provide my opinions regarding the validity of the claims" in the '854 patent. Ex. 1035 ¶ 2. Petitioner also relies on the declaration of Sylvia D. Hall-Ellis, Ph.D. (Ex. 1034, "Hall-Ellis Decl."). Dr. Hall-Ellis states that "I have been retained as an expert by Satco Products, Inc." and "provide my expert opinion regarding the authenticity and public availability of several publications." Ex. 1034 ¶¶ 1–2.

III. DISCRETIONARY DENIAL

Under § 314(a), the Director possesses "broad discretion" in deciding whether to institute an *inter partes* review. *See* 35 U.S.C. § 314(a); *Saint Regis Mohawk Tribe v. Mylan Pharm. Inc.*, 896 F.3d 1322, 1327 (Fed. Cir. 2018). The Board decides whether to institute an *inter partes* review on the Director's behalf. 37 C.F.R. § 42.4(a) (2021).

Patent Owner argues that we should exercise our discretion under § 314(a) to deny institution of an *inter partes* review. *See* Prelim. Resp. 5–14; Prelim. Sur-reply 1–5. Petitioner argues that we should decline to exercise our discretion under § 314(a) to deny institution. *See* Pet. 11–12; Prelim. Reply 1–5. For the reasons explained below, we exercise our discretion under § 314(a) to deny institution.

A. Background

When deciding whether to exercise discretion under § 314(a) to deny institution, the Board has considered the status of litigation involving the parties in light of the AIA's objective "to provide an effective and efficient alternative to district court litigation." *NHK Spring Co. v. Intri-Plex Techs., Inc.*, IPR2018-00752, Paper 8 at 12, 19–20 (PTAB Sept. 12, 2018) (precedential) (quoting *Gen. Plastic Indus. Co. v. Canon Kabushiki Kaisha*, IPR2016-01357, Paper 19 at 16–17 (PTAB Sept. 6, 2017) (precedential as to § II.B.4.i)).

In *Fintiv*, the Board set forth the following nonexclusive factors to consider when determining whether to exercise discretion under § 314(a) to deny institution due to the advanced state of parallel litigation:

(1) whether the court granted a stay or evidence exists that one may be granted if the Board institutes a trial;

(2) the proximity of the court's trial date to the Board's projected statutory deadline for a final written decision;

(3) the investment in the parallel litigation by the court and the parties;

(4) the overlap in the issues raised by the petition and the issues in the parallel litigation;

(5) whether the petitioner and the defendant in the parallel litigation are the same party; and

(6) other circumstances that impact the Board's exercise of discretion, including the merits.

Apple Inc. v. Fintiv, Inc., IPR2020-00019, Paper 11 at 5–6 (PTAB Mar. 20, 2020) (precedential) ("*Fintiv*"). These factors "relate to whether efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date in the parallel proceeding." *Id.* at 6. Further, *Fintiv* instructs that the Board should take "a holistic view of whether efficiency and integrity of the system are best served by denying or instituting review." *Id.* (citing PTAB Consolidated Trial Practice Guide at 58 (Nov. 2019)[2]).

B. The 1220 Investigation

In August 2020, Patent Owner initiated the 1220 investigation by filing a complaint alleging that Petitioner and others infringe the '854 patent and the following patents at issue in the following Board proceedings:

- U.S. Patent No. 9,240,529 B2 ("the '529 patent") at issue in IPR2020-00695;
- U.S. Patent No. 9,859,464 B2 ("the '464 patent") at issue in IPR2020-00813;

[2] Available at https://www.uspto.gov/TrialPracticeGuideConsolidated.

- U.S. Patent No. 10,658,557 B1 ("the '557 patent") at issue in IPR2021-00661; and
- U.S. Patent No. 10,644,213 B1 ("the '213 patent") at issue in IPR2021-00662.

Ex. 2003, Compl. i–iv, 27–48, 59; Ex. 2011, 1; *see* Pet. 2–3. Patent Owner later withdrew its infringement allegations for the '213 patent. Ex. 2006, 2; Ex. 2011, 2; Ex. 2012, 1–2. Hence, the 1220 investigation now involves the '854, '557, '529, and '464 patents. *See, e.g.*, Ex. 2006, 5–7.

In late August and early September 2021, the Administrative Law Judge (ALJ) assigned to the 1220 investigation conducted a five-day evidentiary hearing. Ex. 2013, 1. A few days after the hearing, the ALJ set the following dates: (1) November 12, 2021, for the ALJ's initial determination; and (2) March 14, 2022, for the ITC's final determination (target date). *Id.*

C. The E.D.N.Y. Case

In October 2020, Petitioner filed a complaint in the Eastern District of New York seeking a declaratory judgment of noninfringement for the '557, '854, and '213 patents. Ex. 3001, 2; *see* Pet. 4. In the complaint, Petitioner "did not seek a declaratory judgment of invalidity" for any patent. Pet. 4. About two weeks after filing the complaint, Petitioner filed a motion requesting that the district court stay the case "pending completion" of the 1220 investigation. Ex. 3001, 1–2; *see* Pet. 4. Patent Owner did not oppose the motion. Ex. 3001, 1; *see* Pet. 4.

In September 2021, the district court granted the unopposed motion and stayed the case "pending completion" of the 1220 investigation. Ex. 3002, 1.

D. Analysis

1. FACTOR (1): STAY OF PARALLEL LITIGATION

Patent Owner asserts that factor (1) "strongly" weighs against institution because "the ITC has not granted a stay" in the 1220 investigation. Prelim. Resp. 7. Patent Owner also asserts that "any stay request from Petitioner would be futile given the advanced stage" of the investigation. *Id.*

Petitioner asserts that factor (1) weighs "against discretionary denial" because the E.D.N.Y. case was stayed "at its earliest stage." Prelim. Reply 1.

The *Fintiv* factors "relate to whether efficiency, fairness, and the merits support the exercise of authority to deny institution in view of an earlier trial date in the parallel proceeding." *Fintiv*, IPR2020-00019, Paper 11 at 6. A stay of parallel litigation pending resolution of a Board proceeding "allays concerns about inefficiency and duplication of efforts." *Id.* That the E.D.N.Y. case was stayed "at its earliest stage," however, does not "allay[] concerns about inefficiency and duplication of efforts" in view of the 1220 investigation. Additionally, the E.D.N.Y. case was stayed "pending completion" of the 1220 investigation, not because of any Board proceeding. Ex. 3002, 1.

With dates set in the 1220 investigation for the ALJ's initial determination (i.e., November 12, 2021) and the ITC's final determination (i.e., target date of March 14, 2022), a stay of the 1220 investigation seems highly unlikely, especially with the initial determination date just days away. Hence, factor (1) weighs against institution. *See Fitbit, Inc. v. Koninklijke Philips N.V.*, IPR2020-00771, Paper 14 at 16–17 (PTAB Oct. 19, 2020).

2. FACTOR (2): TRIAL DATE IN PARALLEL LITIGATION

Patent Owner asserts that factor (2) "strongly" weighs against institution because the target date for the ITC's final determination precedes the projected statutory deadline for a final written decision by at least six months. Prelim. Resp. 9; *see* Prelim. Sur-reply 3.

Petitioner asserts that factor (2) weighs "against discretionary denial" because the E.D.N.Y. case was stayed "at its earliest stage." Prelim. Reply 1. Petitioner also asserts that the ITC's final determination is "subject to a 60-day Presidential review period before it is subject to appeal." *Id.* at 2.

As discussed above for factor (1), the stay in the E.D.N.Y case does not "allay[] concerns about inefficiency and duplication of efforts" in view of the 1220 investigation. *See supra* § III.D.1. In the 1220 investigation, the ALJ set March 14, 2022, for the ITC's final determination (target date). Ex. 2013, 1. The patent statute requires a final written decision "not later than" one year after the institution date, i.e., approximately early November 2022 in this proceeding. *See* 35 U.S.C. § 316(a)(11). Even with a 60-day Presidential review period added to the final determination target date, the 1220 investigation should still conclude at least five months before the projected statutory deadline for a final written decision. Because the target date for the ITC's final determination precedes the projected statutory deadline for a final written decision by several months, factor (2) weighs against institution. *See Can. Solar Inc. v. The Solaria Corp.*, IPR2021-00659, Paper 14 at 10 (PTAB Sept. 30, 2021); *Roku, Inc. v. Universal Elecs., Inc.*, IPR2021-00263, Paper 11 at 11 (PTAB July 12, 2021); *Google*

LLC, v. EcoFactor, Inc., IPR2020-00968, Paper 10 at 12 (PTAB Nov. 18, 2020).

3. FACTOR (3): INVESTMENT IN PARALLEL LITIGATION

Patent Owner asserts that factor (3) weighs against institution because the parties "have invested significant resources" in the 1220 investigation, including completing (i) fact discovery, (ii) expert discovery, (iii) *Markman* briefing, (iv) pre-trial briefing, e.g., for summary determinations, and (v) post-trial briefing, e.g., about invalidity. *See* Prelim. Resp. 10 (citing Ex. 2002, Oct. 23, 2020, ITC Order No. 10 Setting Procedural Schedule); Prelim. Sur-reply 1, 3 (citing Ex. 2001, July 15, 2021, ITC Order No. 46 Amended Procedural Schedule). Patent Owner also asserts that the ALJ "issued a claim construction order construing certain claim terms in the '854 patent" and later conducted a five-day evidentiary hearing. Prelim. Resp. 10 (citing Ex. 2006, June 15, 2021, ITC Order No. 39 Construing Certain Claims); Prelim. Sur-reply 1 (citing Ex. 2013, Sept. 7, 2021, ITC Order No. 48 Initial Determination Extending the Target Date).

Petitioner asserts that factor (3) weighs "against discretionary denial" because the E.D.N.Y. case was stayed "at its earliest stage." Prelim. Reply 1.

As discussed above for factor (1), the stay in the E.D.N.Y case does not "allay[] concerns about inefficiency and duplication of efforts" in view of the 1220 investigation. *See supra* § III.D.1. The 1220 investigation has reached a very advanced stage. The parties have completed (i) fact discovery, (ii) expert discovery, (iii) *Markman* briefing, (iv) pre-trial briefing, and (v) post-trial briefing. Ex. 2001, 1–2; Ex. 2002, 1–3. The ALJ has not only construed certain claim terms in the '854 patent but also

conducted a five-day evidentiary hearing. Ex. 2006, 9–11, 16–17; Ex. 2013, 1. Given the substantial investment in the 1220 investigation by the ALJ and the parties, factor (3) weighs against institution. *See Can. Solar*, IPR2021-00659, Paper 14 at 11–12; *Google*, IPR2020-00968, Paper 10 at 12–13.

4. FACTOR (4): OVERLAP IN THE ISSUES

Patent Owner asserts that factor (4) weighs against institution because "nearly all of the issues in the Petition are already at issue" in the 1220 investigation. Prelim. Resp. 13; *see* Prelim. Sur-reply 3. In particular, Patent Owner contends that Petitioner makes essentially the same argument about the '854 patent's effective filing date for its challenge based on Nakamura-959 and Nakamura-949 as for its invalidity defense in the 1220 investigation based on insufficient written-description support for claim 1. Prelim. Resp. 12; *see* Prelim. Sur-reply 3. Patent Owner also contends that Petitioner relies on Tanda, Yamazaki, Schubert, and Uemura in essentially the same way for its challenges here and its invalidity defenses in the 1220 investigation. Resp. 12–13; *see* Prelim. Sur-reply 3.

Patent Owner acknowledges that dependent claims 2–6 "are not currently asserted" in the 1220 investigation. Prelim. Resp. 13; *see* Prelim. Sur-reply 3. But Patent Owner argues that "there remains substantial overlap between" the issues here and the issues at the ITC because of claim 1, "the only independent claim in the '854 patent." Prelim. Resp. 13.

Petitioner asserts that "there are essentially no overlapping issues that can be decided with finality" in the 1220 investigation because ITC decisions on validity "do not have collateral estoppel effect." Pet. 11–12 (citing *Tex. Instrs. Inc. v. Cypress Semiconductor Corp.*, 90 F.3d 1558,

1568–70 (Fed. Cir. 1996); *Nautilus Hyosung Inc. v. Diebold Nixdorf, Inc.*, CBM2016-00034, Paper 33 at 3–4 n.3 (PTAB Aug. 14, 2017)); *see* Prelim. Reply 2. Petitioner also asserts that denying institution in view of the 1220 investigation is "inefficient and undermines the integrity of the patent system" because "[r]egardless of the ITC's findings, invalidity will need to be relitigated in district court unless the Board resolves those issues in this IPR or Patentee voluntarily foregoes district court infringement proceedings." Prelim. Reply 2 (emphasis omitted).

Additionally, Petitioner contends that the challenge based on Nakamura-959 and Nakamura-949 is "not asserted at the ITC at all." Prelim. Reply 3. Petitioner concedes that the challenges based on Tanda, Yamazaki, and Schubert "present obviousness arguments that overlap somewhat with ITC arguments." *Id.* But Petitioner contends that the challenges adding Uemura, Han, Feldman, and Tadatomo "relate to different obviousness combinations" than at the ITC. *Id.*

We agree with Patent Owner that Petitioner makes essentially the same argument about the '854 patent's effective filing date for its challenge before the Board based on Nakamura-959 and Nakamura-949 as for its invalidity defense in the 1220 investigation based on insufficient written-description support for claim 1. *See* Pet. 7, 12–22, 38; Prelim. Resp. 12; Ex. 2004, 29–33; Ex. 2005, 245–48; Ex. 2014, 64–65. Here, Petitioner argues that the '854 patent's written description does not disclose the following cathode/anode limitation in claim 1: "the cathode and anode provide structural support to the transparent surface." Pet. 13–15; *see id.* at 38. At the ITC, Petitioner argues that the '854 patent's written description "does not describe the cathode/anode limitation in any detail to a person of

ordinary skill in the art" and does not "disclose any embodiment that meets this limitation." Ex. 2005, 246; *see* Ex. 2004, 30–33; Ex. 2014, 65.

We also agree with Patent Owner that Petitioner relies on Tanda, Yamazaki, Schubert, and Uemura in essentially the same way for its challenges here and its invalidity defenses in the 1220 investigation. *See* Pet. 26–27, 62–85; Prelim. Resp. 12–13; Ex. 2005, 169–70, 181–96, 253–60; Ex. 2014, 52–56. As an example, Petitioner contends here that claim 1 is unpatentable under § 102 as anticipated by Tanda. *See* Pet. 6, 62–70. Petitioner contends at the ITC that Tanda "invalidates" claim 1. Ex. 2005, 253–60. Patent Owner contends here and at the ITC that Tanda "does not qualify as prior art." Prelim. Resp. 35; *see id.* at 2; Ex. 2005, 169–70; Ex. 2014, 69.

As another example, Petitioner contends here and at the ITC that Yamazaki teaches the following limitations in claim 1: "a transparent surface" and "a cathode on a first end of the transparent surface and an anode on a second end of the transparent surface, wherein the cathode and anode provide structural support to the transparent surface." Pet. 73–75; Ex. 2005, 182–87. Patent Owner contends here and at the ITC that Yamazaki's cathode and anode do not "provide structural support to the transparent surface" as required by claim 1. Prelim. Resp. 36–40; Ex. 2014, 53; *see* Ex. 2005, 185.

As further examples, Petitioner contends here and at the ITC that: (1) Schubert discloses phosphors for white-light conversion; and (2) Uemura discloses vertically oriented leads for vertical mounting. Pet. 26, 72, 81–83; Ex. 2005, 181–82, 189.

Regarding Petitioner's assertion that "there are essentially no overlapping issues that can be decided with finality" in the 1220 investigation because ITC decisions on validity "do not have collateral estoppel effect," in *Fintiv* the Board recognized that "the Office and the district court would not be bound by the ITC's decision" on invalidity. *Fintiv*, IPR2020-00019, Paper 11 at 8. Yet the Board explained that "an earlier ITC trial date may favor exercising authority to deny institution" if the ITC will "decide the same or substantially similar issues to those presented in the petition." *Id.*

As for the preclusive effect of an ITC invalidity determination, the Board has explained that "as a practical matter, it is difficult to maintain a district court proceeding on patent claims determined to be invalid at the ITC." *Fintiv*, IPR2020-00019, Paper 11 at 9. And the Federal Circuit has explained that a district court "can attribute whatever persuasive value to the prior ITC decision that it considers justified." *Tex. Instrs.*, 90 F.3d at 1569.

Moreover, Petitioner may prevail on the infringement issues at the ITC and decide to dismiss the E.D.N.Y. case regardless whether it prevails on the invalidity issues at the ITC. Additionally, Petitioner "did not seek a declaratory judgment of invalidity" for any patent in the E.D.N.Y. case. Pet. 4. Hence, we disagree with Petitioner's assertion that "[r]egardless of the ITC's findings, invalidity will need to be relitigated in district court unless the Board resolves those issues in this IPR or Patentee voluntarily foregoes district court infringement proceedings." *See* Prelim. Reply 2.

When assessing the overlap in the issues, we should consider whether "the petition includes the same or substantially the same claims, grounds, arguments, and evidence as presented in the parallel proceeding." *Fintiv*,

IPR2020-00019, Paper 11 at 12. As discussed above, the record shows substantial overlap in the arguments and evidence here and at the ITC. That dependent claims 2–6 "are not currently asserted" at the ITC does not diminish the substantial overlap in the issues for claim 1.

Nonetheless, the Petition presents some substantively different issues for dependent claims 2–6 that the ITC will not consider. Hence, on balance factor (4) weighs slightly in favor of institution. *See Google*, IPR2020-00968, Paper 10 at 13–15; *see also Roku*, IPR2021-00263, Paper 11 at 8, 15–16 (finding sufficient overlap in the issues even though a parallel ITC investigation involved fewer than half of the challenged claims).

5. FACTOR (5): PETITIONER'S STATUS IN PARALLEL LITIGATION

Patent Owner asserts that Petitioner is a party in the 1220 investigation and that factor (5) "further weighs against institution." Prelim. Resp. 14.

Petitioner admits that it is a party in the 1220 investigation. Pet. 4; Prelim. Reply 3. But Petitioner asserts that factor (5) "is neutral" and that "weighing the factor otherwise undermines the purpose of IPRs." Prelim. Reply 3 (citing *Cisco Sys., Inc. v. Ramot at Tel Aviv Univ. Ltd.*, IPR2020-00122, Paper 15 at 10 (PTAB May 15, 2020) (Crumbley, APJ, dissenting)).

Because Petitioner is a party in the 1220 investigation, factor (5) weighs against institution. *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 15 at 15 (PTAB May 13, 2020) (informative); *see Can. Solar*, IPR2021-00659, Paper 14 at 15; *Roku*, IPR2021-00263, Paper 11 at 16; *Google*, IPR2020-00968, Paper 10 at 16.

6. FACTOR (6): OTHER CIRCUMSTANCES

Factor (6) concerning other circumstances recognizes that a decision whether to exercise discretion under § 314(a) to deny institution should rest on "a balanced assessment of all relevant circumstances in the case, including the merits." *See* Consolidated Trial Practice Guide at 58. For example, "if the merits of a ground raised in the petition seem particularly strong on the preliminary record, this fact has favored institution." *Fintiv*, IPR2020-00019, Paper 11 at 14–15.

Regarding the merits, Patent Owner argues that Petitioner "has failed to meet its burden to demonstrate a likelihood of success on the merits" for every ground raised in the Petition. Prelim. Resp. 14; *see id.* at 34–54.

Regarding the merits, Petitioner argues that "the asserted prior art was not discussed/analyzed during examination." Prelim. Reply 4; *see* Pet. 9–10. For the challenges based on Yamazaki, Schubert, Uemura, Han, Feldman, and Tadatomo, Petitioner argues that Patent Owner "ignor[es] the contents of the Petition and concoct[s] inherency arguments that Petitioner did not raise." Prelim. Reply 4 (citing Prelim. Resp. 36–43).

Additionally, for the challenges based on Nakamura-959, Nakamura-949, and Tanda, Petitioner contends that they "relate to priority date challenges which, at least in part, relate to the application" of 37 C.F.R. § 1.57, i.e., the incorporation-by-reference rule. Prelim. Reply 4 (citing Pet. 12–21). Petitioner also contends that "the Board is in the best position to interpret its own rules correctly" and "should not abdicate that role to the ITC." *Id.*

Further, Petitioner asserts that the Board previously "instituted IPRs against four related/commonly-owned patents," i.e., IPR2020-00579 for U.S.

Patent No. 7,781,789 B2 ("the '789 patent"), IPR2020-00695 for the '529 patent, IPR2020-00780 for U.S. Patent No. 10,217,916 B2 ("the '916 patent"), and IPR2020-00813 for the '464 patent. Pet. 12; *see id.* at 2–3; Prelim. Reply 4. Petitioner asserts that "those IPRs are in the late stages." Pet. 12; *see* Prelim. Reply 4. Petitioner also asserts that it filed petitions challenging three other related patents "near-contemporaneously" to "ensure judicial efficiency," i.e., IPR2021-00661 for the '557 patent, IPR2021-00662 for the '213 patent, and IPR2021-00794 for the '854 patent (this proceeding). Pet. 3, 12; *see* Prelim. Reply 5.

Regarding the merits, we have evaluated Petitioner's challenges to claims 1–6. In our view, some challenges satisfy the "reasonable likelihood" threshold standard for instituting trial, and some do not. We would not characterize any challenge as sufficiently strong to override concerns about duplication of effort by the Board and the ITC.

Regarding the application of 37 C.F.R. § 1.57, Petitioner makes essentially the same argument about the '854 patent's effective filing date for its challenge based on Nakamura-959 and Nakamura-949 as for its invalidity defense based on insufficient written-description support for claim 1. *See* Pet. 7, 12–22, 38; Ex. 2004, 29–33; Ex. 2005, 245–48; Ex. 2014, 64–65. As we understand the arguments, resolving the '854 patent's effective filing date does not require interpreting any part of § 1.57. *See* Pet. 12–22; Prelim. Resp. 28–30. Instead, the issue turns on whether the '154 application supports claim 1 according to § 112's first paragraph. *See* Pet. 12–22; Prelim. Resp. 28–30. Also, the challenges based on Tanda present a similar issue whether the '447 provisional supports

claim 1 according to § 112's first paragraph. *See* Pet. 12–22, 62; Prelim. Resp. 28–30, 35.

"[T]he test for sufficiency is whether the disclosure of the application relied upon reasonably conveys to those skilled in the art that the inventor had possession of the claimed subject matter as of the filing date." *Ariad Pharm., Inc. v. Eli Lilly & Co.*, 598 F.3d 1336, 1351 (Fed. Cir. 2010) (en banc). Under the circumstances here, the ITC can apply the test for sufficiency of disclosure to the '154 application and the '447 provisional just as well as the Board.

Regarding the other *inter partes* reviews identified by Petitioner, efficiencies may result when the Board considers the patentability of claims in different patents having the same disclosure in light of the same or substantially the same references. The '854 patent has the same disclosure as (i) the '916 patent at issue in IPR2020-00780, (ii) the '557 patent at issue in IPR2021-00661, and (iii) the '213 patent at issue in IPR2021-00662. *Compare* Ex. 1001, 8:17–21:32, *with* Ex. 1002, 8:7–21:16, *and* Ex. 1003, 8:1–21:13, *and* Ex. 1028, 13:14–32:23.

On October 12, 2021, the Board issued a Final Written Decision in IPR2020-00780 determining all challenged claims in the '916 patent to be unpatentable. *See Satco Prods., Inc. v. The Regents of the Univ. of Cal.*, IPR2020-00780, Paper 42 (PTAB Oct. 12, 2021). Petitioner does not rely on substantially the same references for the '916 patent as for the '854 patent. *Compare* Pet. 6–7, *with* IPR2020-00780, Paper 3 at 4–5. So previous Board effort related to the '916 patent will not save substantial time when analyzing the patentability issues for the '854 patent.

As for the other proceedings that Petitioner identifies as involving "related/commonly-owned patents," i.e., IPR2020-00579 for the '789 patent, IPR2020-00695 for the '529 patent, and IPR2020-00813 for the '464 patent, the '789, '529, and '464 patents do not have the same disclosure as the '854 patent, although all four patents do have related disclosures. More significantly, Petitioner does not rely on substantially the same references for the '789, '529, and '464 patents as for the '854 patent. *Compare* Pet. 6–7, *with* IPR2020-00579, Paper 1 at 4–5, *and* IPR2020-00695, Paper 2 at 4–5, *and* IPR2020-00813, Paper 2 at 4–5. So previous Board effort related to the '789, '529, and '464 patents will not save substantial time when analyzing the patentability issues for the '854 patent.

As discussed above, the 1220 investigation now involves the '854, '557, '529, and '464 patents. *See* Ex. 2006, 5–7; *supra* § III.B. On September 15, 2021, the Board issued a Final Written Decision in IPR2020-00695 determining all challenged claims in the '529 patent to be unpatentable. *See Satco Prods., Inc. v. The Regents of the Univ. of Cal.*, IPR2020-00695, Paper 41 (PTAB Sept. 15, 2021). On October 19, 2021, the Board issued a Final Written Decision in IPR2020-00813 determining all challenged claims in the '464 patent to be unpatentable. *See Satco Prods., Inc. v. The Regents of the Univ. of Cal.*, IPR2020-00813, Paper 41 (PTAB Oct. 19, 2021).

Hence, in the 1220 investigation the ITC will address the validity of two patents that the Board has already considered (the '529 and '464 patents) and the validity of two patents that the Board has not yet considered (the '854 and '557 patents). In our view, principles of efficiency

and economy favor avoiding further duplication of effort by the Board and the ITC.

Based on "a balanced assessment of all relevant circumstances in the case, including the merits," factor (6) weighs against institution.

E. Conclusion Based on the Factors

After analyzing the Fintiv factors with a holistic view of whether the efficiency and integrity of the system are best served by denying or instituting review, we determine that the factors, on balance, weigh against an *inter partes* review. Even if factor (5) were neutral, the factors, on balance, would still weigh against an *inter partes* review. Hence, we exercise our discretion under § 314(a) to deny institution.

IV. ORDER

Accordingly, it is

ORDERED that the Petition is denied and no trial is instituted.

UNITED STATES PATENT AND TRADEMARK OFFICE

_____

BEFORE THE PATENT TRIAL AND APPEAL BOARD

_____

SATCO PRODUCTS, INC.,
Petitioner,

v.

THE REGENTS OF THE UNIVERSITY OF CALIFORNIA,
Patent Owner.

_____

IPR2021-00794
Patent 10,593,854 B1

_____

Before JENNIFER S. BISK, CHRISTOPHER L. CRUMBLEY, and STEVEN M. AMUNDSON, *Administrative Patent Judges*.

CRUMBLEY, *Administrative Patent Judge*, concurring.

I would weigh the individual factors set forth in *Apple Inc. v. Fintiv, Inc.*, IPR2020-00019, Paper 11 at 5 (PTAB Mar. 20, 2020) (precedential), in a slightly different manner consistent with my approach set forth in prior opinions. *See Cisco Sys., Inc. v. Ramot at Tel Aviv Univ. Ltd*., IPR2020-00122, Paper 15 (PTAB May 15, 2020) (Crumbley, J., dissenting); *GlobalFoundries Inc. v. UNM Rainforest Innovations f/k/a STC.UNM*, IPR2020-00984, Paper 11 (PTAB Dec. 9, 2020) (Crumbley, J., concurring). For instance, I would consider the fifth factor (whether the petitioner and

defendant are the same party) to be neutral. And I would take into consideration the fact that Patent Owner has asserted the '854 patent, as well as several related patents, against a multitude of defendants in multiple proceedings in various district courts and the ITC. *See* Majority Opinion, *supra*, at 3–5. This suggests to me that, in the "holistic view," the "efficiency and integrity of the system are best served" (*Fintiv* at 6) by instituting review here before the Board, and resolving questions as to the patentability of the challenged claims in one proceeding, rather than in the various proceedings involving the '854 patent scattered across the country in various tribunals.

Taking these facts into account, I believe this case presents a close question as to exercise of our discretion to deny institution. But in the end, the fact that the ITC's initial determination will issue so soon, and should address so many of the questions we are asked to decide in the Petition, slightly outweighs the facts that counsel toward institution. My evaluation of the *Fintiv* factors thus leads me to the same ultimate conclusion as that reached by the majority. For this reason, I concur.

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