Filed on behalf of Innovative Display Technologies LLC.
By: Justin B. Kimble (JKimble-IPR@bcpc-law.com)
Jeffrey R. Bragalone (jbragalone@bcpc-law.com)
Bragalone Conroy PC
2200 Ross Ave.
Suite 4500 – West
Dallas, TX 75201
Tel: 214.785.6670
Fax: 214.786.6680

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

MERCEDES-BENZ USA, LLC and
MERCEDES-BENZ U.S. INTERNATIONAL, INC.,
Petitioner,

v.

INNOVATIVE DISPLAY TECHNOLOGIES LLC
Patent Owner

Case IPR2015-00368
U.S. Patent No. 7,434,974

PATENT OWNER'S PRELIMINARY RESPONSE TO PETITION FOR *INTER PARTES* REVIEW OF U.S. PATENT NO. 7,434,974

Mail Stop PATENT BOARD
Patent Trial and Appeal Board
U.S. Patent & Trademark Office
P.O. Box 1450

I. IDENTICAL IPR ALREADY DENIED INSTITUTION

Petitioner admits that this IPR petition is identical to a previous IPR petition filed by LG Display Co., Ltd., namely IPR2014-01092 (the "Copied IPR"). *See* Paper 3, Motion for Joinder Pursuant to 35 U.S.C. § 315 (c) and 37 C.F.R. § 42.122(b) ("Joinder Motion") at 1 ("the invalidity grounds raised in this IPR are identical to the invalidity grounds raised in the LGD IPR."); *see also id.* at 6 ("Petitioner's arguments regarding the asserted references are identical to the arguments LGD raised in the LGD IPR").

The PTAB denied institution of the Copied IPR on January 13, 2015. *See* IPR2014-01092, Paper 9, Decision Denying Institution (attached as Ex. 2001). Because the Copied IPR and this IPR petition include identical grounds and arguments, this IPR petition should also be denied.

For convenience, Patent Owner reproduces below the same arguments it made in its preliminary response to the Copied IPR, with the necessary changes made to reflect the change in petitioner and filing numbers and with non-substantive correctional changes. Patent Owner also deleted the real party-in-interest argument, given that it is unnecessary in light of the PTAB's decision not to institute the Copied IPR.

II. INTRODUCTION

Patent Owner Innovative Display Technologies LLC ("IDT" or "Patent Owner") hereby files this preliminary response ("Preliminary Response") to the Petition for *Inter Partes* Review of U.S. Patent No. 7,434,974 (the "Petition") in IPR2015-00368 filed by Mercedes-Benz USA, LLC and Mercedes-Benz U.S. International, Inc. ("Mercedes-Benz" or "Petitioner").

The PTAB should deny the Petition's request to institute an *inter partes* review ("IPR") of U.S. Patent No. 7,434,974 (the "'974 patent") because the grounds in the Petition do not demonstrate a reasonable likelihood of any claims being invalid.

To explain the insufficiencies of the grounds in the Petition, the Preliminary Response first provides an introduction that outlines (1) the Grounds themselves, (2) the '974 patent and its technology, (3) the prior art references relied upon in the Grounds, and (4) claim construction issues.

This Preliminary Response is timely under 35 U.S.C. § 313 and 37 C.F.R. § 42.107, as it is filed within deadline set by Paper 16 (New Filing Date accorded to Petition and the Extended Due Date for filing Patent Owner's Preliminary Response in accordance with the Conduct of the Proceeding Order, March 16, 2015). Patent Owner has limited its identification of deficiencies in Petitioner's argument in this

Preliminary Response; Patent Owner does not intend to waive any arguments by not addressing them in this Preliminary Response.

A. Grounds in Petition

The Petition includes three grounds of alleged invalidity – all 103(a) obviousness combinations – claims 1, 3-5, 7-11, 13 and 17 of the '974 patent. For the following reasons, which are discussed in more detail below, none of the grounds demonstrate a reasonable likelihood of any claims being invalid:

Ground 1: Unpatentable under 103(a) as obvious over Funamoto (Claims 1, 3-5, 7-11, and 13)

A. The Petition Fails to Establish a Prima Facie Case of Obviousness Based on Funamoto;

B. No Disclosure of Element [1.a] - "at least a light emitting panel member. . .";

C. No Disclosure of Element [1.b] - "at least one LED light source…";

D. No Disclosure of Element [1.g] - "posts, tabs, or other structural features that provide a mount for mounting of the assembly into a larger assembly or device";

E. No Disclosure of Element [7.a] - "at least a light emitting panel member. . .";

F. No Disclosure of Element [7.b] - "at least one LED light source…";

G. No Disclosure of Element [13.a] - "at least a light emitting panel member. . .";

H. No Disclosure of Element [13.b] - "at least one LED light source…";

Ground 2: Unpatentable under 103(a) as obvious over Tsuchiyama in view of Funamoto (Claims 1, 3-5, 7-8, 10-11, and 13)

A. The Petition Fails to Establish That the Combination of Tsuchiyama with Funamoto Would Have Been Obvious;

B. No Disclosure of Element [1.d] - "the panel member has a pattern of light extracting deformities on or in at least one surface";

C. No Disclosure of Element [1.g] - "posts, tabs, or other structural features that provide a mount for mounting of the assembly into a larger assembly or device".

D. No Disclosure of Element [7.d] - "the panel member has a pattern of light extracting deformities on or in at least one surface";

E. No Disclosure of Element [13.d] - "the panel member has a pattern of light extracting deformities on or in at least one surface";

F. No Disclosure of Element [13.g] - "tab, hole, cavity, or protrusion that positions the tray or housing relative to the panel member"

Ground 3: Unpatentable under 103(a) as obvious over Funamoto in view Nakayama (Claims 13 and 17)

A. The Petition Fails to Establish That the Combination of Funamoto and Nakayama Would Have Been Obvious;

B. No Disclosure of Element [13.a] - "at least a light emitting panel member. . ."

C. No Disclosure of Element [13.b] - "at least one LED light source . . ."

D. No Disclosure of Element [13.g] - "tab, hole, cavity, or protrusion that positions the tray or housing relative to the panel member"

E. No Disclosure of Element [17.a] - "at least a light emitting panel member. . ."

F. No Disclosure of Element [17.b] - "at least one LED light source .

G. No Disclosure of Element [17.h] - "tab, hole, cavity, or protrusion holds the additional component away from the panel member to

create an air gap between the panel member and the additional component"

B. The Prior Art in the Petition

1. *Funamoto - Exhibit 1007 – Primary and Secondary Reference, Grounds 1 - 3*

United States Patent No. 5,619,351 to Funamoto et al. ("Funamoto"), was a National phase application entering into the US national stage on May 10, 1994, and issued on April 8, 1997, and it is the primary reference for Grounds 1 and 3 in the Petition and the secondary reference for Ground 2. Two applications claim priority to Funamoto and are discussed in the Petition and later in this Preliminary Response: U.S. Patent No. 6,108,060 ('the '060 patent"), filed May 28, 1999, and published on Aug 22, 2000, is a divisional of U.S. Patent No. 5,949,505 ("the '505 patent"), filed Aug 9, 1996 and issued on Sep 7, 1999.

Funamoto teaches that "to allow for use in color displays, a sufficient brightness is necessary to clearly show the colors displayed in the liquid crystal. This requires the use of a high output fluorescent light in the illumination device." (Funamoto at 1:41-42.) A high output fluorescent light radiates a significant amount of heat from one side of the LCD display, which may result in large temperature distribution slope leading to color and brightness irregularities. (Funamoto at 1:34-50; 8:17-27.) Funamoto further teaches that multiple fluorescent tubes may be used, but the variations in the illumination of the fluorescent tubes requires individual adjustments and slows down the manufacturing processes. (Id. at 1:51-64.) The use of multiple

fluorescent tubes is undesirable also because it causes an increased number of driver circuits. (Id. at 1:65-2:2.) To maintain the requisite brightness, while reducing temperature variation, all without increasing driver circuits, Funamoto teaches the solution of using a single L-shaped or U-shaped fluorescent light source 22, 62 to replace a straight fluorescent light source 92. (Funamoto at 8:17-62), Funamoto does not discuss the use of LEDs as light sources.

2. *Tsuchiyama - Exhibit 1008, Primary Reference, Ground 2*

United States Patent No. 5,548,271 to Tsuchiyama et al. ("Tsuchiyama") is particularly directed to pagers with an LED alert light located in the backlight and not next to the LCD when it is mounted in the front casing of the pager. (Tsuchiyama at 3:44-53.) Locating the alert LEDs next to the LCD is undesirable because this location would take up space on the front casing and limit miniaturization. (Tsuchiyama at 1:39-50.) Tsuchiyama teaches a structure of a backlight 32 accommodating the backlight LED 12a and alert LEDs 12b, a light conducting plate 32a is received in the reflection frame 30, and a diffusion sheet 32b provided on the light conducting plate 32a.

3. *Nakayama- Exhibit 1009, Secondary Reference*

U.S. Patent No. 5,654,779 to Nakayama et al. ("Nakayama") was filed on December 29, 1994, and issued on August 5, 1997. The Petition uses Nakayama as a secondary reference for Ground 3 only. Nakayama is titled "Liquid Crystal Display device having a removable holding member for the light source." One of its

objectives is to provide a liquid crystal display device in which a part of the light guiding board can be removed from the lighting unit section without removing the frames. (Nakayama at 2:12-18.) The process of removing the frame involves cumbersome operations in disassembly and assembly. (Id. at 1:38-46) Nakayama is entirely silent on improving the temperature uniformity or minimizing the number of driver circuits.

C. Claim Construction

The arguments in this Response stand despite Petitioner's proposed construction and despite the broadest reasonable construction of the terms. This Preliminary Response does not take a position on claim construction at this point. Patent Owner reserves the right to propose its own construction of any and all claim terms for which an issue arises in the event the PTAB institutes this IPR.

Patent Owner notifies the Board that the district court in *Innovative Display Technologies v. Acer, Inc. et al.*, No. 2:13-cv-522 (E.D. Tex. 2013) (Dkt. No. 101) ("Claim Construction Order") (Ex. 2002) has ruled on constructions of terms in this patent, including entering an agreed construction of "deformities" that Petitioner adopts in its Petition. (Petition at 8) (Ex. 2002 at 58).

III. GROUND 1 - Funamoto (Claims 1, 3-5, 7-11, and 13)

A. The Petition Fails to Establish a Prima Facie Case of Obviousness Based on Funamoto.

The Petition alleges that claims 1, 3-5, 7-11, and 13 are rendered obvious by Funamoto but fails to establish the prerequisites for demonstrating prima facie obviousness.

As confirmed by the Supreme Court in KSR, an obviousness analysis begins with a consideration of the Graham factors. KSR International Co. v. Teleflex Inc., 550 U.S. 398, 406-407 (2007) (citing Graham v. John Deere Co., 383 U.S. 1 (1966)). The Graham factors are as follows:

(A) Determining the scope and content of the prior art;

(B) Ascertaining the differences between the claimed invention and the prior art; and

(C) Resolving the level of ordinary skill in the pertinent art.

Graham at 17-18.

In considering the Graham factors, both the claimed invention and the scope and content of the prior art must be considered **as a whole**, including disclosures in the references that diverge from and teach away from the invention at hand. W.L. Gore & Assoc., Inc. v. Garlock, Inc., 721 F.2d 1540, (Fed. Cir. 1983), *cert. denied*, 469 U.S. 851 (1984). It is improper to limit the obviousness inquiry to a difference from the prior art and then to show that that difference alone would have been

obvious. Schenck v. Nortron Corp., 713 F.2d 782 (Fed. Cir. 1983). But this improper element-by-element analysis is exactly the approach used in the Petition.

The Petition refers to a claim chart for Ground 1 and the Escuti Declaration for an element-by-element comparison of the claimed elements to the alleged teachings of Funamoto. (See Petition at pp. 15-26; Escuti Declaration at pp. 30-41). For example, the Petition and the accompanying Escuti Declaration argue that "a person of ordinary skill in the art would easily substitute an LED for the fluorescent light source disclosed." (Petition at p 13.) But this allegation is focused narrowly on the difference of between the claimed LED light source and the fluorescent light source of Funamoto.

The Petition fails to consider Funamoto as whole and account for the potential negative impacts to Funamoto's device if the proposed substitution were implemented. The Preliminary Response will explain below how the negative impacts of the proposed substitution would indeed diverge from and teach away from the proposed substitution, but as a matter of law, the Petition's obviousness inquiry is improperly limited to a difference from the prior art and a showing that the difference alone would have been obvious. Such an improper obviousness inquiry is deficient and cannot be the basis for establishing a prima facie case of obviousness.

Because the Petition fails to demonstrate a prima facie case that Funamoto as a whole would render the claimed subject matter obvious, Ground 1 fails for all claims.

B. No Disclosure of Element [1.a] - "at least a light emitting panel member. . ."

Independent Claim 1 of the '974 patent recites the following limitation: "at least a light emitting panel member having a light entrance surface and a light emitting surface…." That limitation is referenced as "[1.a]" in the Petition. See, e.g., Petition at p. 15.

The Petitioner alleges that the polarizer 21 of Funamoto is the panel member recited in claim 1 but admits that "it is not immediately clear that the polarizer is a light emitting panel member." (Petition at p. 12.) Indeed, a polarizer operates to filter out a portion of incident unpolarized light so as to provide polarized light. One of ordinary skill in the art would appreciate that the polarizer 21 of Funamoto would result in a significant light loss as the portion of incident light not having the desired polarization would be filtered out. With this understanding, one of ordinary skill in the art would have no reason to consider the polarizer 21 of Funamoto as a light emitting panel member as recited in claim 1 of the '974 patent.

Despite the Petitioner's admission as discussed above, the Petitioner refers to U.S. Patent No. 6,108,060 ('the '060 patent") in an attempt to substitute Funamoto's teaching of a polarizer 21 with language in the '060 patent. The '060 patent is a

divisional grandchild of Funamoto. The Petition alleges that the ’060 Patent replaced the term “polarizer” with the phrase “light guide plate.” (Petition at p. 12) The Petition goes on to import the phrase “light guide plate” into Funamoto in place of the term “polarizer” relying merely on a conclusory statement that the term “polarizer” as used in Funamoto “must be a translation error.” (Escuti Declaration at pp. 34-35)

The Petition does not allege the teachings of Funamoto would lead one of ordinary skill in the art to understand term “polarizer” differently from its ordinary meaning. The Petition’s importing of the language from the ’060 patent disregards the plain language in Funamoto. The term “polarizer” is a term of art. It is unlikely that the meanings of the term “polarizer” and phrase “light guide plate” would be confused or used in error by one of ordinary skill in the art.

Moreover, as admitted in the Petition, the ’060 patent resulted from an intervening patent, the U.S. Patent No. 5,949,505 (“the ’505 patent”), but Petition ignores the language used in the ’505 patent without explanation and focuses only on the ’060 patent. (Escuti Declaration at pp. 34-35.) But the term “polarizer” is consistently used in both Funamoto and the ’505 patent during the lengthy prosecution of Funamoto and the ’505 patent, spanning more than 5 years from 1994 to 1999.

Even assuming arguendo that the term "polarizer" was a translation error, Funamoto would have been a non-enabling disclosure at the time of the present invention. The '060 patent was published on August 22, 2000 – more than 5 years after the effective filing date of the '974 patent. Although Funamoto was alleged to have a §102(e) date of May 10, 1994, the alleged corrected translation was not available to one of ordinary skill in the art until more than 6 years later – well after the effective filing date of the '974 patent. The Petition has failed to explain how one of ordinary skill in the art would be enabled to arrive at the claimed subject matter without undue experimentation despite the alleged translation error for one of the key components of Funamoto.

For at least the above discussed reasons, the Petition fails to establish that Funamoto teaches the claimed light emitting panel member or was an enabling disclosure at the time of the present invention. Accordingly, Ground 1 of the Petition fails for Claim 1 and each of its dependent claims.

C. No Disclosure of Element [1.b] - "at least one LED light source . . ."

Independent Claim 1 of the '974 patent recites the following limitation: "at least one LED light source positioned near or against the light entrance surface…." That limitation is referenced as "[1.b]" in the Petition. *See, e.g.*, Petition at p. 15-16.

The Petition admits that Funamoto does not teach an LED light source as recited in claim 1. (Petition at p. 12) The Petition attempts to cure the deficiencies

of Funamoto by arguing that it would be obvious to "substitute an LED for the fluorescent light source disclosed." (Petition at p 12.) Patent Owner disagrees. Funamoto explicitly states that a fluorescent light source is required, and therefore it would have not been obvious to "substitute an LED" as Petitioner argues. (*See* Funamoto at 1:41-42 ("to allow for use in color displays, a sufficient brightness is necessary to clearly show the colors displayed in the liquid crystal. This requires the use of a high output fluorescent light in the illumination device.") (emphasis added)).

Furthermore, the Petition's substitution argument does not consider Funamoto as whole. A proper Graham inquiry must include the consideration of the potential negative impacts to Funamoto's device if the proposed substitution were implemented. Funamoto teaches that a high output fluorescent light radiates a significant amount of heat from one side of the LCD display, which may result in large temperature distribution slope leading to color and brightness irregularities. (Funamoto at 1:34-50; 8:17-27.) Funamoto further teaches that multiple fluorescent tubes may be used but the variations in the illumination of the fluorescent tubes requires individual adjustments and slows down the manufacturing processes. (Id. at 1:51-64.) The use of multiple fluorescent tubes is undesirable also because the need for increased number of driver circuits. (Id. at 1:65-2:2.) To reduce temperature variation without increasing driver circuits, Funamoto teaches the solution of using

of a single L-shaped or U-shaped fluorescent light source 22, 62 to replace a straight fluorescent light source 92. (Funamoto at 8:17-62)

The Petition alleges that "an LED would have been an obvious design choice at the time of the Funamoto, selected for its efficiency and low power consumption, among other things." (Petition at 13.) If it were such an obvious design choice, why was Funamoto entirely silent on the use of an LED light source?

The Petition does not describe the kind of LED or the arrangement of LEDs that "would have been an obvious design choice" to replace the L-shaped or U-shaped fluorescent light source. (Petition at 13). The Petition does not allege its generic substitution of an LED will achieve the brightness required by Funamoto and otherwise achieved by its Funamoto's fluorescent light source. The Petition does not allege that the generic substitution of LEDs can maintain the reduced number of driver circuits required by Funamoto or the temperature uniformity required by Funamoto. These are crucial pieces of information that are missing in the Petition's obviousness analysis. The single U-shaped or L-shaped fluorescent light of Funamoto is not simply a swappable part with a single generic LED. Accordingly, for at least the above discussed reasons, the Petition fails to allege a prima facie case of obviousness based on Funamoto. Ground 1 of the Petition fails for Claim 1 and each of its dependent claims.

D. No Disclosure of Element [1.g] - "posts, tabs, or other structural features that provide a mount for mounting of the assembly into a larger assembly or device"

Independent Claim 1 of the '974 patent recites the following limitation: "wherein the tray or housing…has posts, tabs, or other structural features that provide a mount for mounting of the assembly into a larger assembly or device." That limitation is referenced as "[1.g]" in the Petition. *See, e.g.*, Petition at p. 19.

The Petition alleges that "[t]he structural feature represented by element 4 [of Funamoto] allows for the bottom tray with all of the components within, to be mounted into the top case." (Petition at p. 13) The Escuti declaration cited in the Petition further argues that the illumination device 20 of Funamoto is installed in lower case 3 and "this assembly can be mounted into a larger assembly or device, for example, the mounting of the upper case with the tooth." (Escuti Declaration at p. 40). But, the Petition already defines the upper case (2) as part of the tray. (Petition at 16, element [1.c] ("an illumination device to be described later sandwiched between upper case 2 and lower case 3") (emphasis in Petition).). Thus, mounting upper case 2 to lower case 3, if it exists, to form the alleged tray does not result in a "mounting of the assembly into a larger assembly or device." (emphasis added). Instead, it is simply putting together the parts of the alleged tray, *i.e.*, upper case 2 and lower case 3 are already the tray.

The Petition's only other allegation made its claim chart for this limitation is devoid of analysis. The Petition's claim chart for Ground 1 includes a citation to a passage in Funamoto referring the frames 30, 31, 38, and 39, but the Petition does not otherwise specifically allege or provide any analysis to support an allegation that the frames 30, 31, 38, and 39 are "posts, tabs, or other structural features that provide a mount for mounting…."

The Petition's citation to the Escuti Declaration in the claim chart cannot cure the Petition's lack of analysis. Under 37 C.F.R. § 42.22(a)(2), the petition must contain a "full statement of the reasons for the relief requested, including a detailed explanation of the significance of the evidence." The rules also prohibit arguments made in a supporting document from being incorporated by reference into a petition. *See* 37 C.F.R. § 42.6(a)(3). For that reason, information presented in the Escuti Declaration in relation to claim 1 that is not sufficiently included in the Petition itself should not be considered.

For at least the above discussed reasons, the Petition has not established that the claimed feature of "posts, tabs, or other structural features that provide a mount for mounting of the assembly into a larger assembly or device" is disclosed or rendered obvious by Funamoto. Thus, Ground 1 fails for Claim 1 and each of its dependent claims because Petitioner has not made a prima facie case of obviousness.

E. No Disclosure of Element [7.a] - "at least a light emitting panel member. . ."

Independent Claim 7 of the '974 patent recites the following limitation: "at least a light emitting panel member having a light entrance surface and a light emitting surface…." That limitation is referenced as "[7.a]" in the Petition. See, e.g., Petition at p. 20.

For the same reasons provided above, Funamoto does not disclose this claim element or render it obvious. The Petition again attempts to import language from the '060 patent based solely on a conclusory allegation of a translation error, which disregards Funamoto's consistent teaching of a polarizer for over 5 years. Moreover, even assuming *arguendo* that the term "polarizer" was a translation error, the Petition fails to explain how one of ordinary skill in the art would be enabled to arrive at the claimed subject matter without undue experimentation despite the alleged translation error for one of the key components of Funamoto.

For at least the above discussed reasons, the Petition fails to establish that Funamoto teaches the claimed light emitting panel member or was an enabling disclosure at the time of the present invention. Accordingly, Ground 1 of the Petition fails for Claim 7 and each of its dependent claims.

F. No Disclosure of Element [7.b] - "at least one LED light source . . ."

Independent Claim 7 of the '974 patent recites the following limitation: "at least one LED light source positioned near or against the light entrance surface…." That limitation is referenced as "[7.b]" in the Petition. *See, e.g.*, Petition at p. 20.

For the same reasons provided above, Funamoto does not disclose this claim element or render it obvious. The Petition admits that Funamoto does not teach an LED light source. (Petition at p. 12.) The Petition attempts to cure the deficiencies of Funamoto by arguing that it would be obvious to "substitute an LED for the fluorescent light source disclosed." (Petition at p 13.). But as discussed above, this allegation does not consider Funamoto as whole. It does not show that the substitution of a generic LED would achieve the brightness required by Funamoto, and it does not show that it would achieve the explicit objectives of Funamoto to minimize driver circuits and temperature variations.

Accordingly, for at least the above discussed reasons, the Petition fails to allege a prima facie case of obviousness based on Funamoto. Ground 1 of the Petition fails for Claim 7 and each of its dependent claims.

G. No Disclosure of Element [13.a] - "at least a light emitting panel member. . ."

Independent Claim 13 of the '974 patent recites the following limitation: "at least a light emitting panel member having a light entrance surface and a light

emitting surface…." That limitation is referenced as "[13.a]" in the Petition. See, e.g., Petition at p. 24.

For the same reasons provided above, Funamoto does not disclose this claim element or render it obvious. The Petition again attempts to import language from the '060 patent based solely on a conclusory allegation of a translation error and disregards Funamoto's consistent teaching of a polarizer for over 5 years. Moreover, even assuming *arguendo* that the term "polarizer" was a translation error, the Petition fails to explain how one of ordinary skill in the art would be enabled to arrive at the claimed subject matter without undue experimentation despite the alleged translation error for one of the key components of Funamoto.

For at least the above discussed reasons, the Petition fails to establish that Funamoto teaches the claimed light emitting panel member or was an enabling disclosure at the time of the present invention. Accordingly, Ground 1 of the Petition fails for Claim 13 and each of its dependent claims.

H. No Disclosure of Element [13.b] - "at least one LED light source . . ."

Independent Claim 13 of the '974 patent recites the following limitation: "at least one LED light source positioned near or against the light entrance surface…." That limitation is referenced as "[13.b]" in the Petition. *See, e.g.*, Petition at p. 24.

For the same reasons provided above, Funamoto does not disclose this claim element or render it obvious. The Petition admits that Funamoto does not teach an

LED light source. (Petition at p. 12.) The Petition attempts to cure the deficiencies of Funamoto by arguing that it would be obvious to "substitute an LED for the fluorescent light source disclosed." (Petition at p 13.). But as discussed above, this allegation does not consider Funamoto as whole. It does not show that the substitution of a generic LED would achieve the brightness required by Funamoto, and it does not show that it would achieve the explicit objectives of Funamoto to minimize driver circuits and temperature variations.

Accordingly, for at least the above discussed reasons, the Petition fails to allege a prima facie case of obviousness based on Funamoto. Ground 1 of the Petition fails for Claim 13 and each of its dependent claims.

IV. GROUND 2 - TSUCHIYAMA IN VIEW OF FUNAMOTO (CLAIMS 1, 3-5, 7-8, 10-11, and 13)

A. The Petition Fails to Establish That the Combination of Tsuchiyama with Funamoto Would Have Been Obvious

This Preliminary Response has already demonstrated that the Petition has failed to conduct the requisite Graham inquiry and consider Funamoto's teaching as a whole. (*See e.g.*, Section III.A *supra*.) For its alleged combination of Tsuchiyama and Funamoto, the Petition continues to fail to make the requisite inquiry and justify the alleged combination with articulated reasoning with some rational underpinning instead of unsupported conclusory statements. "[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some

articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006).

Over-generalizing the teachings of Tsuchiyama and Funamoto, the Petition alleges that "[a] person of ordinary skill in the art would have been motivated to combine the teaching of Tsuchiyama with the teachings of Funamoto **because they are both directed to a thinner and smaller device**." (Petition at p. 28, emphasis added.) The Petition's statement is conclusory and unsupported by sufficient evidence or analysis. While Tsuchiyama is directed to a miniaturized design for a pager, the technical solution disclosed by Tsuchiyama is more particularly directed to locating an LED alert light in the backlight of a pager. (Tsuchiyama at 3:44-53) Funamoto, on the other hand, is directed to technical problems unrelated to Tsuchiyama. As discussed above in Sections III.A and C, Funamoto discloses technical solutions for minimizing the number of driver circuits and temperature variations. These objectives of Funamoto are recognized in the Petition for Grounds 1 and 3, yet the Petition ignores them here for the convenience of aligning Tsuchiyama and Funamoto for Ground 2. (Petition at 10 and 39.)

Ultimately, the Petition fails to explain why a person of ordinary skill in the art reading Tsuchiyama would seek out Funamoto when these two references are directed at vastly different technical problems. Because the Petition fails to

demonstrate a prima facie case that the combination of Tsuchiyama and Funamoto was obvious, Ground 2 fails for all claims.

B. No Disclosure of Element [1.d] - "the panel member has a pattern of light extracting deformities on or in at least one surface"

Independent Claim 1 of the '974 patent recites the following limitation: "wherein the panel member has a pattern of light extracting deformities on or in at least one surface to cause light to be emitted from the light emitting surface of the panel member." That limitation is referenced as "[1.d]" in the Petition. (*See*, *e.g.*, Petition at 32-33.)

The Petition admits that Tsuchiyama does not teach a pattern on or in at least one surface of the panel member as recited in claim 1. (Petition at p. 28.) The Petition attempts to cure the deficiencies of Tsuchiyama by arguing that "a person of ordinary skill would have been motivated to combine the assembly of Tsuchiyama with the deformities of Funamoto because the deformities are used to control characteristics of the light, including output, uniformity, etc." (Id.) This allegation, without more, is a mere conclusory statement restating the function of the alleged deformities in Funamoto. The conclusory statements of the Petition lack the "articulated reasoning" required to demonstrate that the combination of Tsuchiyama and Funamoto would have been obvious to a person of ordinary skill in the art.

Because the Petition fails to demonstrate a prima facie case that the combination of Tsuchiyama with the teachings of Funamoto was obvious, Ground 2 should be denied for Claim 1 and each of its dependent claims.

C. No Disclosure of Element [1.g] - "posts, tabs, or other structural features that provide a mount for mounting of the assembly into a larger assembly or device"

Independent Claim 1 of the '974 patent recites the following limitation: "wherein the tray or housing…has posts, tabs, or other structural features that provide a mount for mounting of the assembly into a larger assembly or device." That limitation is referenced as "[1.g]" in the Petition. *See, e.g.*, Petition at p. 33-34.

The totality of the allegation made in the Petition consists of one conclusory statement related to Tsuchiyama: "The two labeled holes are structural features that provide a mount for the mounting of the assembly into a larger assembly or device because the LEDs fit into the holes in such a manner as **to allow the entire structure to come together**" (Petition at p. 29, emphasis added.) The Petition did not explain what constitutes "the entire structure," "the assembly," and "a larger assembly." The Petition's allegation is devoid of analysis and insufficient to support a prima facie case of obviousness.

For at least the above discussed reasons, the Petition has not established that the claimed feature of "posts, tabs, or other structural features that provide a mount for mounting of the assembly into a larger assembly or device" is rendered obvious

by Tsuchiyama in view of Funamoto. Ground 2 fails for Claim 1 and each of its dependent claims because Petitioner has not made a prima facie case of obviousness.

D. No Disclosure of Element [7.d] - "the panel member has a pattern of light extracting deformities on or in at least one surface"

Independent Claim 7 of the '974 patent recites the following limitation: "wherein the panel member has a pattern of light extracting deformities on or in at least one surface to cause light to be emitted from the light emitting surface of the panel member." That limitation is referenced as "[7.d]" in the Petition. *See, e.g.*, Petition at p. 35.

For the same reasons provided in Section IV.B, Tsuchiyama and Funamoto do not disclose this claim element or render it obvious. The Petition admits that Tsuchiyama does not teach this claim element. (Petition at p. 28) The Petition attempts to cure the deficiencies of Tsuchiyama by arguing that "a person of ordinary skill would have been motivated to combine the assembly of Tsuchiyama with the deformities of Funamoto because the deformities are used to control characteristics of the light, including output, uniformity, etc." (Id.) This allegation, without more, is a mere conclusory statement restating the function of the alleged deformities in Funamoto and lacks the "articulated reasoning" required to demonstrate that the combination of Tsuchiyama and Funamoto would have been obvious to a person of ordinary skill in the art.

Because the Petition fails to demonstrate a prima facie case that the combination of Tsuchiyama with the teachings of Funamoto was obvious, Ground 2 should be denied for Claim 7 and each of its dependent claims.

E. No Disclosure of Element [13.d] - "the panel member has a pattern of light extracting deformities on or in at least one surface"

Independent Claim 13 of the '974 patent recites the following limitation: "wherein the panel member has a pattern of light extracting deformities on or in at least one surface to cause light to be emitted from the light emitting surface of the panel member." That limitation is referenced as "[13.d]" in the Petition. *See*, *e.g.*, Petition at p. 38.

For the same reasons provided in Section III.B, Tsuchiyama and Funamoto do not disclose this claim element or render it obvious. The Petition admits that Tsuchiyama does not teach this claim element. (Petition at p. 29) The Petition attempts to cure the deficiencies of Tsuchiyama by arguing that "a person of ordinary skill would have been motivated to combine the assembly of Tsuchiyama with the deformities of Funamoto because the deformities are used to control characteristics of the light, including output, uniformity, etc." (Id.) This allegation, without more, is a mere conclusory statement restating the function of the alleged deformities in Funamoto and lacks the "articulated reasoning" required to demonstrate that the combination of Tsuchiyama and Funamoto would have been obvious to a person of ordinary skill in the art.

Because the Petition fails to demonstrate a prima facie case that the combination of Tsuchiyama with the teachings of Funamoto was obvious, Ground 2 should be denied for Claim 13 and each of its dependent claims.

F. No Disclosure of Element [13.g] - "tab, hole, cavity, or protrusion that positions the tray or housing relative to the panel member"

Independent Claim 13 of the '974 patent recites the following limitation: "the panel member having at least one of a tab, hole, cavity, or protrusion that positions the tray or housing relative to the panel member." That limitation is referenced as "[13.g]" in the Petition. *See, e.g.*, Petition at p. 39.

The totality of the allegation made in the Petition consists of one conclusory statement related to Tsuchiyama: "Also, the holes meet the limitation of the panel member having at least one of a tab, hole, cavity, or protrusion that positions the tray or housing relative to the panel member." (Petition at p. 30, quotations omitted) The Petition does not explain what constitutes "the tray or housing" that is positioned relative to the panel member by the holes.

In fact, Tsuchiyama teaches that the light conducting plate 38 is formed with openings 38a and 38b, and the "backlight LEDs 12a and alert LEDs 12b are securely received in the openings 38a and 38b, respectively." (Tsuchiyama at 3:31-40) Therefore, what is positioned relative to the light conducting plate 38 by the openings 38a and 38b are the LEDs 12a and 12b – which are not alleged in the Petition to be a housing or tray.

For at least the above discussed reasons, the Petition has not established that the claimed feature of "the panel member having at least one of a tab, hole, cavity, or protrusion that positions the tray or housing relative to the panel member" is rendered obvious by Tsuchiyama in view of Funamoto. Ground 2 fails for Claim 13 and each of its dependent claims because Petitioner has not made a prima facie case of obviousness.

V. GROUND 3 - FUNAMOTO IN VIEW OF NAKAYAMA (CLAIMS 13 AND 17)

A. The Petition Fails to Establish That the Combination of Funamoto and Nakayama Would Have Been Obvious

For its alleged combination of Funamoto and Nakayama, the Petition continues to fail to make the requisite obviousness inquiry and justify the alleged combination with articulated reasoning with some rational underpinning instead of unsupported conclusory statements. "[R]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead, there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness." *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006).

The allegations in the Petition for Ground 3 are contradictory. The Petition first alleges that "[a] person of ordinary skill in the art would have been motivated to combine the teachings of Funamoto and Nakayama **because the patents were directed to the same goals**." (Petition at 40.) But the petition then goes on to

describe two different and unrelated technical problems and objectives for Funamoto and Nakayama. (Id.) The Petition admits that Funamoto is directed to an "illumination device … which can be temperature controlled, and without increasing the number of driver circuits" while Nakayama is directed to "an LCD device where part of the guiding board can be removed…." (Id., citation omitted.)

The Petition fails to explain why a person of ordinary skill in the art reading Funamoto would seek out Nakayama when these two references are directed at those two different technical problems. Because the Petition fails to demonstrate a prima facie case that the combination of Tsuchiyama and Funamoto was obvious, Ground 3 fails for all claims.

B. No Disclosure of Element [13.a] - "at least a light emitting panel member. . ."

Independent Claim 13 of the '974 patent recites the following limitation: "at least a light emitting panel member having a light entrance surface and a light emitting surface…." That limitation is referenced as "[13.a]" in the Petition. See, e.g., Petition at p. 43.

For the same reasons provided in Section III.B, Funamoto does not disclose this claim element or render it obvious. The Petition again attempts to import language from the '060 patent based solely on a conclusory allegation of a translation error and disregarding Funamoto's consistent teaching of a polarizer for over 5 years. Moreover, even assuming *arguendo* that the term "polarizer" was a translation

error, the Petition fails to explain how one of ordinary skill in the art would be enabled to arrive at the claimed subject matter without undue experimentation despite the alleged translation error for one of the key components of Funamoto.

For at least the above discussed reasons, the Petition fails to establish that Funamoto teaches the claimed light emitting panel member or was an enabling disclosure at the time of the present invention. Accordingly, Ground 3 of the Petition fails for Claim 13 and each of its dependent claims because a prima facie case of obviousness has not been established.

C. No Disclosure of Element [13.b] - "at least one LED light source . . ."

Independent Claim 13 of the '974 patent recites the following limitation: "at least one LED light source positioned near or against the light entrance surface…." That limitation is referenced as "[13.b]" in the Petition. *See, e.g.*, Petition at p. 43.

For the same reasons provided in Section III.C, Funamoto does not disclose this claim element or render it obvious. The Petition admits that Funamoto does not teach an LED light source. (Petition at p. 13) The Petition attempts to cure the deficiencies of Funamoto by arguing that it would be obvious to "substitute an LED for the fluorescent light source disclosed." (Petition at p 13.) But as discussed above, this allegation does not consider Funamoto as whole. It does not show that the substitution of a generic LED would achieve the brightness required by Funamoto,

and it does not show that it would achieve the explicit objectives of Funamoto to minimize driver circuits and temperature variations.

The Petition does not allege that Nakayama contributes in any way to rendering this limitation obvious. Accordingly, for at least the above discussed reasons, the combination of Funamoto and Nakayama cannot render this limitation obvious, and therefore the Petition fails to allege a prima facie case of obviousness based on this combination. Accordingly, Ground 3 of the Petition fails for Claim 13 and each of its dependent claims.

D. No Disclosure of Element [13.g] - "tab, hole, cavity, or protrusion that positions the tray or housing relative to the panel member"

Independent Claim 13 of the '974 patent recites the following limitation: "the panel member having at least one of a tab, hole, cavity, or protrusion that positions the tray or housing relative to the panel member." That limitation is referenced as "[13.g]" in the Petition. (*See, e.g.*, Petition at 46-47).

The Petition alleges that the Nakayama teaches light guiding parts 4a and inner light guiding part 4b, and each has a notch that allows for fitting the panel member 4 within the assembly which includes the tray. (Id.) However, the Petition omits any attempt to justify the combination of modifying Funamoto to include this alleged feature of Nakayama. In particular, it is unclear what would motivate one of ordinary skill in the art to modify Funamoto when Nakayama's light guiding parts are Nakayama's solution for a technical problem that is entirely unrelated to

Funamoto's objective of minimizing temperature variation without increasing the number of driver circuits. As such, the Petition's allegation of the combination of Funamoto and Nakayama is unsupported by articulated reasoning with some rational underpinning and is deficient on its face.

The Petition's citation to the Escuti Declaration offers no help in the analysis. Under 37 C.F.R. § 42.22(a)(2), the petition must contain a "full statement of the reasons for the relief requested, including a detailed explanation of the significance of the evidence." The rules also prohibit arguments made in a supporting document from being incorporated by reference into a petition. *See* 37 C.F.R. § 42.6(a)(3). For that reason, information presented in the Escuti Declaration in relation to claim 13 that is not sufficiently included in the Petition itself should not be considered.

For at least the above discussed reasons, the Petition has not established that the claimed feature of "the panel member having at least one of a tab, hole, cavity, or protrusion that positions the tray or housing relative to the panel member" is rendered obvious by Funamoto and Nakayama. Ground 3 fails for Claim 13 and each of its dependent claims because Petitioner has not made a prima facie case of obviousness.

E. No Disclosure of Element [17.a] - "at least a light emitting panel member. . ."

Independent Claim 17 of the '974 patent recites the following limitation: "at least a light emitting panel member having a light entrance surface and a light

emitting surface…." That limitation is referenced as "[17.a]" in the Petition. (*See, e.g.*, Petition at 48.)

For the same reasons provided in Section III.B, Funamoto does not disclose this claim element or render it obvious. The Petition again attempts to import language from the '060 patent based solely on a conclusory allegation of a translation error and disregarding Funamoto's consistent teaching of a polarizer for over 5 years. Moreover, even assuming arguendo that the term "polarizer" was a translation error, the Petition fails to explain how one of ordinary skill in the art would be enabled to arrive at the claimed subject matter without undue experimentation despite the alleged translation error for one of the key components of Funamoto.

The Petition does not allege that Nakayama contributes in any way to rendering this limitation obvious. Accordingly, for at least the above discussed reasons, the combination of Funamoto and Nakayama cannot render this limitation obvious, and therefore the Petition fails to allege a prima facie case of obviousness based on this combination. Accordingly, Ground 3 of the Petition fails for Claim 17.

F. No Disclosure of Element [17.b] - "at least one LED light source . . ."

Independent Claim 17 of the '974 patent recites the following limitation: "at least one LED light source positioned near or against the light entrance surface…." That limitation is referenced as "[17.b]" in the Petition. (*See, e.g.*, Petition at p. 48.)

For the same reasons provided in Section III.C, Funamoto does not disclose this claim element or render it obvious. The Petition admits that Funamoto does not teach an LED light source. (Petition at p. 13) The Petition attempts to cure the deficiencies of Funamoto by arguing that it would be obvious to "substitute an LED for the fluorescent light source disclosed." (Petition at p 13.) But as discussed above, this allegation does not consider Funamoto as whole. It does not show that the substitution of a generic LED would achieve the brightness required by Funamoto, and it does not show that it would achieve the explicit objectives of Funamoto to minimize driver circuits and temperature variations.

The Petition does not allege that Nakayama contributes in any way to rendering this limitation obvious. Accordingly, for at least the above discussed reasons, the combination of Funamoto and Nakayama cannot render this limitation obvious, and therefore the Petition fails to allege a prima facie case of obviousness based on this combination. Accordingly, Ground 3 of the Petition fails for Claim 17.

G. No Disclosure of Element [17.h] - "tab, hole, cavity, or protrusion holds the additional component away from the panel member to create an air gap between the panel member and the additional component"

Independent Claim 17 of the '974 patent recites the following limitation: "wherein the at least one of a tab, hole, cavity, or protrusion holds the additional component away from the panel member to create an air gap between the panel

member and the additional component." That limitation is referenced as "[17.h]" in the Petition. (*See, e.g.*, Petition at p. 50-51.)

The Petition alleges that "panel member 4 (blue) of Nakayama can be beveled shaped, which allows for an air gap (gray) between the panel member 4 (blue) and the additional component, in this case, light diffusing film 27 (green)." (Petition at 42). However, the Petition omits any attempt to justify the combination of modifying Funamoto to include this alleged feature of Nakayama. In particular, it is unclear what would motivate one of ordinary skill in the art to modify Funamoto when Nakayama's light guiding parts are Nakayama's solution for a technical problem that is entirely unrelated to Funamoto's objective of minimizing temperature variation without increasing the number of driver circuits. As such, the Petition's allegation of the combination of Funamoto and Nakayama is unsupported by articulated reasoning with some rational underpinning and is deficient on its face.

The Petition's citation to the Escuti Declaration offers no help in the analysis. Under 37 C.F.R. § 42.22(a)(2), the petition must contain a "full statement of the reasons for the relief requested, including a detailed explanation of the significance of the evidence." The rules also prohibit arguments made in a supporting document from being incorporated by reference into a petition. *See* 37 C.F.R. § 42.6(a)(3). For that reason, information presented in the Escuti Declaration in relation to claim 17 that is not sufficiently included in the Petition itself should not be considered.

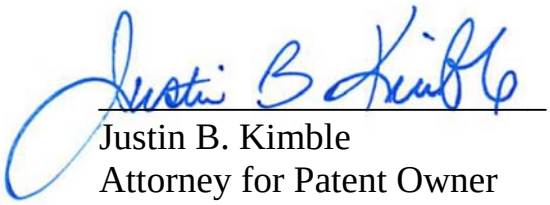
Accordingly, for at least the above discussed reasons, the combination of Funamoto and Nakayama cannot render this limitation obvious because the Petition fails to allege a prima facie case of obviousness based on this combination. Accordingly, Ground 3 of the Petition fails for Claim 17.

VI. CONCLUSIONS

This Preliminary Response shows that none of the Grounds proposed in the Petition are reasonably likely to invalidate any of the claims of the ’974 patent. For the reasons contained herein, Patent Owner requests that the PTAB deny the Petition.

Dated: April 30, 2015

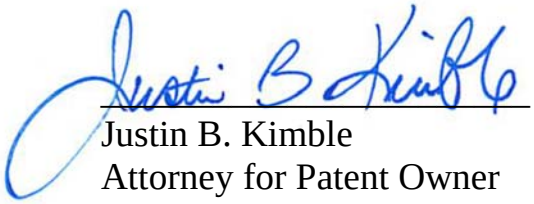
Respectfully submitted,



Justin B. Kimble
Attorney for Patent Owner
Registration No. 58,591
Bragalone Conroy PC
2200 Ross Ave.
Suite 4500 – West
Dallas, TX 75201

CERTIFICATE OF SERVICE

The undersigned hereby certifies that document has been served via electronic mail on April 30, 2015, to Petitioner at following email addresses pursuant to its consent in its Updated Mandatory Notice: Scott.Doyle@Shearman.com and Jonathan.DeFosse@Shearman.com. Patent Owner's attorneys are aware that Mr. Doyle and Mr. DeFosse have changed firms to Fried Frank since they last filed Mandatory Notices. As a courtesy, Patent Owner is also serving them at their new firm's email addresses.



Justin B. Kimble
Attorney for Patent Owner
Registration No. 58,591
Bragalone Conroy PC
2200 Ross Ave.
Suite 4500 – West
Dallas, TX 75201