

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.

Inter Partes Review of U.S. Patent No. 6,755,547

Issue Date: June 29, 2004

Patent Title: Light Emitting Panel Assemblies

IPR Case No.: *To Be Assigned*

PETITION FOR *INTER PARTES* REVIEW OF CLAIMS 1-4, 16, AND 26 OF
U.S. PATENT NO. 6,755,547

Scott T. Weingaertner
Registration No. 37,756
King & Spalding LLP
1185 Avenue of the Americas
New York, NY 10036-2601
Tel.: (212) 556-2227
Fax: (212) 556-2222
Email: sweingaertner@kslaw.com

Natasha H. Moffitt
Registration No. 53,340
King & Spalding LLP
1180 Peachtree Street, NE
Atlanta, GA 30309
Tel.: (404) 572-2783
Fax: (404) 572-5134
Email: nmoffitt@kslaw.com

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PETITIONER’S EXHIBIT LIST

Description	Exhibit #
U.S. Patent No. 6,755,547	1001
Prosecution History of U.S. Patent No. 6,755,547	1002
Complaints filed in Related District Court Cases	1003
Declaration of Michael J. Escuti, Ph.D. (“Escuti Decl.”)	1004
U.S. Patent No. 5,461,547 (“Ciupke”)	1005
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U.S. Patent No. 5,160,195 (“Miller”)	1011
J. A. Castellano, <i>Handbook of Display Technology</i> , Academic Press Inc., San Diego, 1992, at pp. 9-13 and Ch. 8	1012
U.S. Patent No. 5,384,658 (“Ohtake”)	1013
U.S. Patent No. 5,303,322 (“Winston”)	1014
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EP500960 (“Ohe”)	1016
U.S. Patent No. 5,828,488 (“Ouderkirk”)	1017
3M product brochure 75-0500-0403-7, “Brightness Enhancement Film (BEF)”, 2 pages (1993)	1018
U.S. Patent No. 5,706,134 (“Konno”)	1019
U.S. Patent No. 5,944,405 (“Takeuchi”)	1020
U.S. Patent No. 5,381,309 (“Borchardt”)	1021

Pursuant to 35 U.S.C. §311, Petitioner hereby respectfully requests *inter partes* review of claims 1-4, 16, and 26 of Ex. 1001, U.S. Patent No. 6,755,547 (“the ’547 Patent”) which issued on June 29, 2004. The challenged claims are unpatentable under 35 U.S.C. §§102 and 103 over the prior art publications identified and applied in this Petition.

I. MANDATORY NOTICES

Pursuant to 37 C.F.R. §42.8, Petitioner provides the following mandatory disclosures:

A. Real Parties-In-Interest. Mercedes-Benz USA, LLC, a Delaware limited liability company with its principal place of business at 1 Mercedes Drive, Montvale, New Jersey 07465, and Mercedes-Benz U.S. International, Inc., an Alabama corporation with its principal place of business at 1 Mercedes Drive, Vance, Alabama 35490, are real parties-in-interest.

B. Related Matters. Pursuant to 37 C.F.R. §42.8(b)(2), Petitioner submits that the ’547 Patent is the subject of a patent infringement lawsuit brought by the Patent Owner, Innovative Display Technologies LLC (*see* Ex. 1003), against Petitioner in the United States District Court for the Eastern District of Texas: *Innovative Display Technologies LLC v. Mercedes-Benz U.S. International, Inc. and Mercedes-Benz USA, LLC* Case No. 2:14-cv-535. In addition, the ’547 Patent is the subject of another IPR, IPR2014-01357. The ’547 Patent is also asserted in at least the actions listed in the chart below.

Description	Docket Number
<i>Innovative Display Technologies LLC (“IDT”) v. Acer Inc. et al.</i>	2:13-cv-522, EDTX
<i>IDT v. American Honda Motor Co., et. al.</i>	2:14-cv-00222, EDTX
<i>IDT v. Apple Inc.</i>	2:14-cv-00030, EDTX
<i>IDT v. Apple Inc.</i>	2:14-cv-00301, EDTX
<i>IDT v. AT&T Inc., et. al.</i>	2:14-cv-00720, EDTX
<i>IDT v. Best Buy Co., Inc., et. al.</i>	2:14-cv-00532, EDTX
<i>IDT v. BMW of North America, LLC, et. al.</i>	2:14-cv-00106, EDTX
<i>IDT v. Canon U.S.A. Inc., et. al.</i>	2:14-cv-00142, EDTX
<i>IDT v. Research in Motion Limited et al.</i>	2:13-cv-00526, EDTX
<i>IDT v. Dell Inc.</i>	2:13-cv-00523, EDTX
<i>IDT v. Ford Motor Company</i>	1:14-cv-00849, D. Del
<i>IDT v. General Motors Company</i>	1:14-cv-00850, D. Del.
<i>IDT v. Google Inc., et. al.</i>	2:14-cv-00302, EDTX
<i>IDT v. Hewlett-Packard Company</i>	2:13-cv-00524, EDTX
<i>IDT v. Huawei Investment, et al.</i>	2:13-cv-00525, EDTX
<i>IDT v. Hyundai Motor Group, et al.</i>	2:14-cv-00201, EDTX
<i>IDT v. Mazda Motor Corporation, et al.</i>	2:14-cv-00624, EDTX
<i>IDT v. LG Electronics, Inc., et al.</i>	1:13-cv-02109, D. Del.
<i>IDT v. Microsoft Corporation</i>	2:13-cv-00783, EDTX
<i>IDT v. Mitac Digital Corporation</i>	2:13-cv-00144, EDTX
<i>IDT v. Nikon Inc., et. al.</i>	2:14-cv-00145, EDTX
<i>IDT v. Nissan Motor, Co., Ltd., et. al.</i>	2:14-cv-00202, EDTX
<i>IDT v. Nokia Corporation and Nokia Inc.</i>	2:13-cv-00784, EDTX
<i>IDT v. Sprint Corporation, et. al.</i>	2:14-cv-00721, EDTX
<i>IDT v. T-Mobile US, Inc., et. al.</i>	2:14-cv-00723, EDTX
<i>IDT v. Toyota Motor Corporation, et. al.</i>	2:14-cv-00200, EDTX
<i>IDT v. Verizon Communications, Inc., et. al.</i>	2:14-cv-00722, EDTX
<i>IDT v. Volkswagen Ag., et. al.</i>	2:14-cv-00300, EDTX

Description	Docket Number
<i>IDT v. ZTE Corporation and ZTE (USA) Inc.</i>	2:13-cv-00527, EDTX
<i>Delaware Display Group LLC (“DDG”) and IDT v. Amazon.com, Inc.</i>	1:13-cv-2106, D. Del.
<i>DDG and IDT v. HTC Corporation et al.</i>	1:13-cv-02107, D. Del.
<i>DDG and IDT v. Lenovo Group Ltd., et al.</i>	1:13-cv-02108, D. Del.
<i>DDG and IDT v. LG Electronics Inc., et al.</i>	1:13-cv-02109, D. Del.
<i>DDG and IDT v. Pantech Co.,Ltd, et al.</i>	1:13-cv-02110, D. Del.
<i>DDG and IDT v. Sony Corporation et al.</i>	1:13-cv-02111, D. Del.
<i>DDG and IDT v. Vizio, Inc.</i>	1:13-cv-02112, D. Del.

Petitioner is concurrently filing petitions to review U.S. Patent Nos. 7,300,194, 7,434,974, 7,404,660, 8,215,816, and 7,384,177, which are in the same family as the ’547 Patent. The ’547 Patent is a divisional of U.S. Patent No. 6,712,481, which is continuation in part of U.S. Patent No. 6,079,838, which is a divisional of U.S. Patent No. 5,613,751.

C. Lead and Back-up Counsel.

Petitioner provides the following designation of counsel:

LEAD COUNSEL	BACK-UP COUNSEL
Scott T. Weingaertner Reg. No. 37,756 King & Spalding LLP 1185 Avenue of the Americas New York, NY 10036-2601 Tel.: (212) 556-2227 Fax: (212) 556-2222 sweingaertner@kslaw.com	Natasha H. Moffitt Reg. No. 53,340 King & Spalding LLP 1180 Peachtree Street, NE Atlanta, GA 30309 Tel.: (404) 572-2783 Fax: (404) 572-5134 nmoffitt@kslaw.com

D. Service Information. Pursuant to 37 C.F.R. §42.8(b)(4), Petitioner identifies

the following service information: Please direct all correspondence regarding this proceeding to lead counsel at the address identified above. Petitioner consents to electronic service by email: sweingaertner@kslaw.com and nmoffitt@kslaw.com.

II. PAYMENT OF FEES

The U.S. Patent Office is authorized to charge the filing fee for this Petition, as well as any other fees that may be required in connection with this Petition or these proceedings on behalf of Petitioner, to the deposit account of King & Spalding LLP, Deposit Account No. 11-0980.

III. STANDING

Pursuant to 37 C.F.R. §42.104(a), Petitioner certifies that the patent sought for review, the '547 Patent, is available for *inter partes* review and that Petitioner is not barred or estopped from requesting an *inter partes* review of the patent.

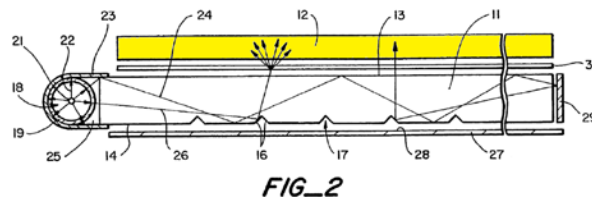
IV. REQUEST FOR *INTER PARTES* REVIEW OF CLAIMS 1-4, 16, AND 26 OF THE '547 PATENT

Pursuant to 37 C.F.R. §42.104(b), Petitioner requests that the Board find unpatentable claims 1-4, 16, and 26 of the '547 Patent. Such relief is justified as the alleged invention of the '547 Patent was described by others prior to the effective filing date of the '547 Patent.

A. Technology Background

Generally, light emitting panel assemblies are used in conjunction with liquid crystal displays ("LCDs") and various applications thereof, as a backlight module to provide light to the display. Ex. 1004, Declaration of Michael J. Escuti, Ph.D. ("Escuti

Decl.”), ¶38. The light emitting panel assembly is composed of all the elements of the LCD other than the liquid crystals themselves. *Id.* For example, the light emitting panel assembly is all but element 12 (in yellow) in the annotated figure below from Ex. 1005, U.S. Patent No. 5,461,547 (“Ciupke”).



In order to produce surface illumination with the target brightness and uniformity at the lowest possible electrical power, the light emitting panel assembly can include features to spatially homogenize and control the angular distribution of emitted light. Escuti Decl., ¶42. Examples of these features include light pipes, a transition area, reflectors, and various types of microstructured deformities (*e.g.*, microprisms, diffusers, and microlenses). *Id.* ¶43. The light pipe, also sometimes called a light guide or wave guide, accepts light injected from the side and distributes it across the emission area. The '547 Patent calls the light pipe a “transparent panel member” (*e.g.*, Ex. 1001, 1:16-17), “light emitting panel member” (*e.g.*, *id.* 1:33-31), and “transparent light emitting panel” (*e.g.*, *id.* 2:65). *See* Escuti Decl., ¶43. The transition area, which is usually between the light source and the light pipe, is used to securely position the light source relative to the light pipe, and to spread and transmit light to produce a more uniform input illumination. *Id.* ¶44. The '547 Patent refers to a “light transition member or area” that enables emitted light “to make the transition from the

light source 3 to the light emitting panel 2” and was “well known in the art.” *See* Ex. 1001, 2:67-3:2. Deformities, such as microprisms, diffusers, and microlenses, are employed to control the direction and spatial uniformity of light within light emitting panel assemblies. Escuti Decl., ¶¶45-49.

B. The Alleged Invention Of The '547 Patent

The '547 Patent relates “to light emitting panel assemblies each including a transparent panel member for efficiently conducting light, and controlling the light conducted by the panel member to be emitted from one or more light output areas along the length thereof.” Ex. 1001, 1:15-19. As the '547 Patent acknowledges, “[l]ight emitting panel assemblies are generally known.” *Id.* 1:20. The purported advantage of the alleged invention described in the '547 Patent relates to several different light emitting panel assembly configurations which allegedly provide for better control of light output from the panel assembly and for more “efficient” utilization of light, thereby resulting in greater light output from the panel assembly. *Id.* 1:21-25. Yet, as shown further below, prior art such as Ex. 1006, U.S. Patent No. 5,005,108 (“Pristash”) already disclosed such advantages. *See, e.g.*, Ex. 1006, 1:10-16.

The '547 Patent discloses light emitting assemblies having a sheet, film, or plate having pattern of light extracting deformities on or in one or both sides and overlying the panel member. Ex. 1001, Abstract; *see also* Escuti Decl., ¶¶52-53. The pattern of light extracting deformities may vary in size, shape, density or placement for controlling the light output distribution for a particular application. *Id.*; *see also* Escuti

Decl., ¶¶52-53.

V. CLAIM CONSTRUCTION

A. Standards For Claim Construction

A claim subject to *inter partes* review is given its “broadest reasonable construction in light of the specification of the patent in which it appears.” 37 C.F.R. §42.100(b). This means that the words of the claim are given their plain meaning from the perspective of one of ordinary skill in the art unless that meaning is inconsistent with the specification. *In re Zletz*, 893 F.2d 319, 321 (Fed. Cir. 1989). Petitioner submits, for the purposes of *inter partes* review only, that the claim terms are presumed to take on their broadest reasonable interpretation in light of the specification of the ’547 Patent.

B. “deformities” (Claims 1-4, 16, 26)

The ’547 Patent expressly defines the term “deformities” as follows: “As used herein, the term deformities or disruptions are used interchangeably to mean any change in the shape or geometry of the panel surface and/or coating or surface treatment that causes a portion of the light to be emitted.” Ex. 1001, 4:42-46. Thus, based on the express definition of deformities in the specification, “deformities” (claims 1-4, 16, 26) should be construed to mean “any change in the shape or geometry of a surface and/or coating or surface treatment that causes a portion of the light to be emitted.” Escuti Decl., ¶67.

VI. SUMMARY OF PRIOR ART TO THE ’547 PATENT FORMING THE

BASIS FOR THIS PETITION

A. Admitted Prior Art

The '547 Patent discusses the following functionality and structure of prior art light emitting assemblies: (1) a “transparent light emitting panel 2,” (2) “one or more light sources 3 which emit light in a predetermined pattern,” and (3) “a light transition member or area 4 used to make the transition from the light source 3 to the light emitting panel.” Ex. 1001, 2:62-3:2 (describing these elements and their functionalities as being “well known in the art”).

B. U.S. Patent No. 4,729,068 (“Ohe”) (Ex. 1007)

Ohe discloses a light diffusing device for illuminating a large display surface with a uniform brightness. Ex. 1007, 2:31-33. The objective of Ohe was to increase the uniformity of the brightness though the entire front surface of the device. *Id.* 2:26-28. Ohe qualifies as prior art under 35 U.S.C. §102(b) because it issued as a patent on March 1, 1988, more than one year before the June 27, 1995 priority date to which the '547 Patent may be entitled. Ohe was not cited or considered during prosecution of the application that led to the '547 Patent.

C. U.S. Patent No. 5,598,280 (“Nishio”) (Ex. 1008)

Nishio discloses a film lens and a surface light source adopted for backlighting a display unit, such as a liquid crystal display. Ex. 1008, 1:7-10. Nishio qualifies as prior art under 35 U.S.C. §102(e) because Nishio was filed on March 22, 1994, before the June 27, 1995 priority date to which the '547 Patent may be entitled. Nishio was

not cited or considered during prosecution of the application that led to the '547 Patent.

D. U.S. Patent No. 5,005,108 (“Pristash”) (Ex. 1006)

Pristash discloses a thin panel illuminator for more efficient light transmission from the light source to the light emitting panel. Ex. 1006, Abstract. Pristash qualifies as prior art under 35 U.S.C. §102(b) because Pristash issued as a patent on April 2, 1991, more than one year before the June 27, 1995 priority date to which the '547 Patent may be entitled. Pristash was cited as a reference in an Information Disclosure Statement during prosecution, but was not relied upon as the basis to reject any claim. In fact, Pristash was not discussed on the record at all during the prosecution proceedings.

E. U.S. Patent No. 5,408,388 (“Kobayashi”) (Ex. 1009)

Kobayashi discloses a planar illuminating device having “increased illuminance” and an “increased uniformity in surface illumination.” Ex. 1009, 2:14-16, 2:59-61. Kobayashi qualifies as prior art under 35 U.S.C. §102(a) because Kobayashi was issued as a patent on April 18, 1995, before the June 27, 1995 priority date to which the '547 Patent may be entitled. Kobayashi was not cited or considered during prosecution of the application that led to the '547 Patent.

F. U.S. Patent No. 5,386,347 (“Matsumoto”) (Ex. 1010)

Matsumoto discloses an illuminating apparatus within which an edge light conductor is used. Ex. 1010, Title. Matsumoto qualifies as prior art under 35 U.S.C.

§ 102(a) because Matsumoto issued as a patent on January 31, 1995, before the June 27, 1995 priority date to which the '547 patent may be entitled. Mastumoto was not cited or considered during prosecution of the application that led to the '547 Patent.

VII. GROUNDS FOR UNPATENTABILITY OF EACH CLAIM

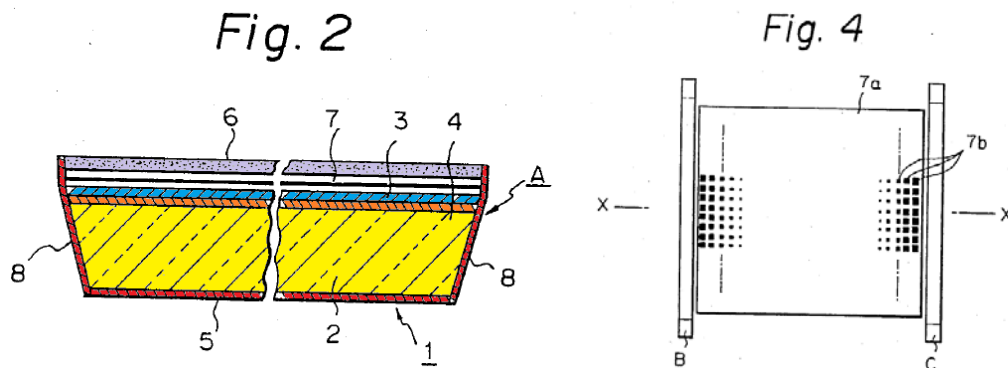
In light of the disclosures detailed below, the '547 Patent is unpatentable for at least the reasons summarized in the chart below and discussed in more detail herein.

Ground #	Ground	Prior art	Exhibit(s) #	Claims
1	102(b)	Ohe	Ex. 1007	1-4, 26
2	102(e)	Nishio	Ex. 1008	1, 3, 4, 16
3	103(a)	Pristash	Ex. 1006	1-4, 16, 26
4	103(a)	Kobayashi and Ohe	Ex. 1009 and Ex. 1007	1-4, 16, 26
5	103(a)	Pristash and Matsumoto	Ex. 1006 and Ex. 1010	1-4, 26

A. Ground 1: Claims 1-4 and 26 are Unpatentable Under 35 U.S.C. §102 as Anticipated by Ohe

Ohe discloses a light diffusing device for illuminating a large display surface with a uniform brightness. Ex. 1007, 2:31-33. According to Ohe, a problem existed in that a brightness at a location close to the light source edge was different from another location far from the light source edge. *Id.* 2:20-26. The objective of Ohe was to increase the uniformity of the brightness though the entire front surface of the device. *Id.* 2:26-28. To solve this problem, Ohe discloses an overlying light reflecting film 7 consisting of a transparent substrate film and a number of light reflecting spots or small places formed on the substrate in a pattern for evenly distributing the quantity of transmitted light from base plate 1 to the light diffusing plate 6 (shown in

purple in annotated Fig. 2 below). *Id.* 3:47-52; *see also* 5:51-55. Figure 4 below depicts light reflecting spots 7b, having a decreasing density with an increased distance from light sources B and C. *Id.* 6:16-19. The pattern of light reflecting spots is not limited to that shown in Figure 4 and may vary in size and density. *Id.* 6:54-61.

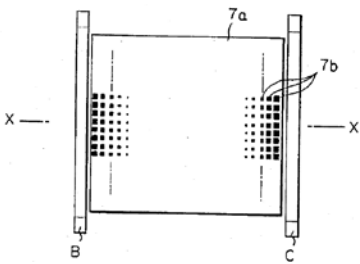


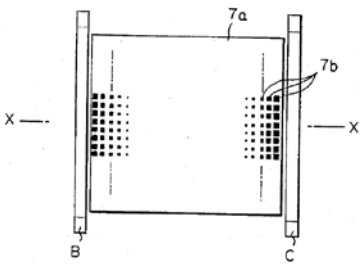
Ohe discloses a light reflecting film 7 overlying a light emitting surface with small, varying deformities, as required by claim 1. Ex. 1007, 3:47-52. Ohe also discloses deformities varying in size, shape, and placement, or have random or varying changes in shape or geometry, as required by claims 2-4 and 26. *See* Escuti Decl., ¶¶80-83. According to Ohe, deformities on overlying film, light reflecting film 7, may vary in “size, configuration, and distribution density.” Ex. 1007, 6:3-9.

In light of the above, the table below demonstrates how each limitation of claims 1-4 and 26 of the '547 Patent is disclosed by Ohe. For all these reasons, claims 1-4 and 26 are unpatentable over Ohe and thus, Petitioner has a reasonable likelihood of prevailing with respect to at least one claim.

'547 Claim Element	Ohe (Ex. 1007)
1. A backlight assembly comprising	<p>“The present invention relates to a <u>light diffusing device</u>. Particularly, the present invention relates to an improved light diffusing device useful for every illuminating a relatively large area at a significantly reduced optical loss.” Ex. 1007, 1:6-10.</p> <p><i>See Escuti Decl., ¶75</i></p>
[1.a] a light emitting member having at least one light emitting area that emits light that is internally reflected within the light emitting member,	<p>“Referring to FIG. 1, the base plate 1 has a pair of light incident edge faces facing and exposed to light sources (for instance, fluorescent lamps) B and C which are provided with reflectors D and E, respectively.” Ex. 1007, 4:4-8.</p> <p>“In the embodiment of the light diffusing device indicated in FIG. 1, the base plate 1 the light reflecting film 7, and the light diffusing plate 6 have rectangular plane configurations similar in shape and dimensions to each other.” <i>Id.</i> 3:66-4:2; <i>see also</i> Fig. 1 below.</p> <div data-bbox="764 978 1187 1276" data-label="Image"> <p>The diagram, labeled Fig. 1, shows a perspective view of a rectangular light diffusing device. The device consists of a base plate 1, a light reflecting film 7, and a light diffusing plate 6. Light sources B and C are positioned at the bottom and right edges, respectively, with reflectors D and E. Arrows indicate light paths and viewing directions I and II.</p> </div> <p>“Referring to FIGS. 1, 2 and 4, when the light sources (fluorescent lamp) B and C are lit, the irradiated light is introduced into the transparent light transmitting layer 2 through the light incident edge face thereof facing the light sources. The introduced light, portions of which are reflected by the light reflecting surface layer 5 and by the light reflecting edge face layer 8 and returned into the transparent light transmitting layer 2, are transmitted to the light diffusing layer 3 through the intermediate layer 4. The light is diffused by the light diffusing layer 3 and is irradiated to the light diffusing plate 6 through the light reflecting film 7.” <i>Id.</i> 8:4-15.</p> <p><i>See Escuti Decl., ¶¶76-78.</i></p>

'547 Claim Element	Ohe (Ex. 1007)
<p>[1.b] a separate transparent sheet or film overlying the light emitting area with an air gap therebetween,</p>	<p>“In the embodiment of the light diffusing device indicated in FIG. 1, the base plate 1 <u>the light reflecting film 7</u>, and the light diffusing plate 6 have rectangular plane configurations similar in shape and dimensions to each other.” Ex. 1007, 3:66-4:2; <i>see also</i> Fig. 1 above.</p> <p>“This light reflecting film 7 consists of a transparent substrate film and a number of light reflecting small spots or small places formed on the transparent substrate film in a pattern effective for evenly distributing the quantity of light transmitted from the base plate 1 to the light diffusing plate 6. The light reflecting film 7 is not forced into close contact or adhesion with the light diffusing plate 6 and the light diffusing layer 3 in the base plate 1. That is, the light reflecting film 7 is spaced from the light diffusing plate 6 by a <u>very thin gap</u> and from the light diffusing layer 3 also by a <u>very thin gap</u>. <u>These very thin gaps form very thin air layers.</u>” <i>Id.</i> 3:47-59.</p> <p><i>See</i> Escuti Decl., ¶79.</p>
<p>[1.c] a pattern of deformities on one side of the sheet or film having a width and length that is quite small in relation to the width and length of the sheet or film,</p>	<p>“A light reflecting film 7 is interposed between the light diffusing plate 6 and the light diffusing layer 3. This light reflecting film 7 consists of a transparent substrate film and a <u>number of light reflecting small spots or small places formed</u> on the transparent substrate film in a pattern effective for evenly distributing the quantity of light transmitted from the base plate 1 to the light diffusing plate 6.” Ex. 1007, 3:45-52.</p> <p>“Usually, the light reflecting film comprises a transparent film substrate and <u>a number of light reflecting small spots or small places formed</u> on the film substrate. The size, configuration, and distribution density of the light reflecting spots are designed so that they cause the distribution of light transmitted through the light reflecting film to be uniform.” <i>Id.</i> 6:3-9.</p>

'547 Claim Element	Ohe (Ex. 1007)
	<p style="text-align: center;"><i>Fig. 4</i></p>  <p><i>Id.</i> Fig. 4.</p> <p><i>See</i> Escuti Decl., ¶¶80-82.</p>
<p>[1.d] the deformities varying at different locations on the sheet or film to direct the light that is emitted by the, light emitting member in different directions to produce a desired light output distribution such that the light will pass through a liquid crystal display with low loss.</p>	<p>“A light reflecting film 7 is interposed between the light diffusing plate 6 and the light diffusing layer 3. This light reflecting film 7 consists of a transparent substrate film and a number of light reflecting small spots or small places formed on the transparent substrate film in a pattern effective for evenly distributing the quantity of light transmitted from the base plate 1 to the light diffusing plate 6.” Ex. 1007, 3:45-52.</p> <p>“Referring to FIG. 4, <u>the size (area) and the distribution density of the light reflecting spots 7b decreases with an increase in the distance from the light source B or C.</u> A total area of the spots in the light reflecting film 7 in the above-mentioned end portions thereof increases with decrease in the distance from the light source B or C. In the middle portion of the light reflecting film, the light reflecting spots are not arranged on the transparent film substrate.” <i>Id.</i> 6:15-23.</p> <p>“Usually, the light reflecting film comprises a transparent film substrate and a number of light reflecting small spots or small places formed on the film substrate. <u>The size, configuration, and distribution density of the light reflecting spots are designed so that they cause the distribution of light transmitted through the light reflecting film to be uniform.</u>” <i>Id.</i> 6:3-9.</p>

'547 Claim Element	Ohe (Ex. 1007)
	<p style="text-align: center;"><i>Fig. 4</i></p>  <p><i>Id.</i>, Fig. 4.</p> <p>“Referring to FIGS. 1, 2 and 4, when the light sources (fluorescent lamp) B and C are lit, the irradiated light is introduced into the transparent light transmitting layer 2 through the light incident edge face thereof facing the light sources. The introduced light, portions of which are reflected by the light reflecting surface layer 5 and by the light reflecting edge face layer 8 and returned into the transparent light transmitting layer 2, are transmitted to the light diffusing layer 3 through the intermediate layer 4. The light is diffused by the light diffusing layer 3 and is irradiated to the light diffusing plate 6 through the light reflecting film 7.” <i>Id.</i> 8:4-15.</p> <p>“The light diffusing device of the present invention provides a <u>highly uniform illumination</u> with evenly scattered light at a <u>reduced optical loss</u>. That is, the light diffusing device of the present invention is extremely useful for a <u>large size display system</u>.” <i>Id.</i> 8:31-35.</p> <p>“Another object of the present invention is to provide a light diffusing device having a <u>significantly decreased optical loss</u>.” <i>Id.</i> 2:34-36.</p> <p><i>See</i> Escuti Decl., ¶¶83-85.</p>
<p>2. The assembly of claim 1 wherein the deformities vary in size at different locations on the sheet or film to direct the light in different directions.</p>	<p>“A light reflecting film 7 is interposed between the light diffusing plate 6 and the light diffusing layer 3. This light reflecting film 7 consists of a transparent substrate film and a number of light reflecting small spots or small places formed on the transparent substrate film in a pattern effective for evenly distributing the quantity of light transmitted from the base plate 1 to the light diffusing</p>

'547 Claim Element	Ohe (Ex. 1007)
	<p>plate 6. ” Ex. 1007, 3:45-52.</p> <p>“Usually, the light reflecting film comprises a transparent film substrate and a number of light reflecting small spots or small places formed on the film substrate. <u>The size</u>, configuration, and distribution density of the light reflecting spots are designed so that they cause the distribution of light transmitted through the light reflecting film to be uniform.” <i>Id.</i> 6:3-9; <i>see also</i> Fig. 4 above.</p> <p>“<u>The size of the light reflecting spots may vary</u> with the distance from the light source, as shown in FIG. 5. Also, the light reflecting spots having the same size may be distributed at a different distribution density on the transparent film substrate.” <i>Id.</i> 4:56-61.</p> <p><i>See</i> Escuti Decl., ¶¶87-90.</p>
<p>3. The assembly of claim 1 wherein the deformities vary in shape at different locations on the sheet or film to direct the light in different directions.</p>	<p>“A light reflecting film 7 is interposed between the light diffusing plate 6 and the light diffusing layer 3. This light reflecting film 7 consists of a transparent substrate film and a number of light reflecting small spots or small places formed on the transparent substrate film in a pattern effective for evenly distributing the quantity of light transmitted from the base plate 1 to the light diffusing plate 6. ” Ex. 1007, 3:45-52.</p> <p>“Usually, the light reflecting film comprises a transparent film substrate and a number of light reflecting small spots or small places formed on the film substrate. The size, <u>configuration</u>, and distribution density of the light reflecting spots are designed so that they cause the distribution of light transmitted through the light reflecting film to be uniform.” <i>Id.</i> 6:3-9; <i>see also</i> Fig. 4 above.</p> <p><i>See</i> Escuti Decl., ¶¶92-94.</p>
<p>4. The assembly of claim 1 wherein the deformities vary in placement at different locations on the sheet or film to direct the light in different directions.</p>	<p>“Usually, the light reflecting film comprises a transparent film substrate and a number of light reflecting small spots or small places formed on the film substrate. The size, configuration, and distribution density of the light reflecting spots are designed so that they cause the distribution of light transmitted through the light reflecting</p>

'547 Claim Element	Ohe (Ex. 1007)
	<p>film to be uniform.” Ex. 1007, 6:3-9.</p> <p>“Referring to FIG. 4, <u>the size (area) and the distribution density of the light reflecting spots 7b decreases with an increase in the distance from the light source B or C.</u> A total area of the spots in the light reflecting film 7 in the above-mentioned end portions thereof increases with decrease in the distance from the light source B or C. In the middle portion of the light reflecting film, the light reflecting spots are not arranged on the transparent film substrate.” <i>Id.</i> 6:15-23; <i>see also</i> Fig. 4 above.</p> <p>“In this case, <u>the density of the light reflecting spots decreases</u> with an increase in the distance from the single light source.” <i>Id.</i> 6:38-40.</p> <p>“<u>The size of the light reflecting spots may vary with the distance</u> from the light source, as shown in FIG. 5. Also, the light reflecting spots having the same size may be distributed at a different distribution density on the transparent film substrate.” <i>Id.</i> 4:56-61.</p> <p><i>See</i> Escuti Decl., ¶¶96-100.</p>
<p>26. The assembly of claim 1 wherein at least some of the deformities have random or varying changes in shape or geometry on the sheet or film to direct the light in different directions.</p>	<p>“A light reflecting film 7 is interposed between the light diffusing plate 6 and the light diffusing layer 3. This light reflecting film 7 consists of a transparent substrate film and a number of light reflecting small spots or small places formed on the transparent substrate film in a pattern effective for evenly distributing the quantity of light transmitted from the base plate 1 to the light diffusing plate 6.” Ex. 1007, 3:45-52.</p> <p>“Usually, the light reflecting film comprises a transparent film substrate and a number of light reflecting small spots or small places formed on the film substrate. The size, configuration, and distribution density of the light reflecting spots are designed so that they cause the distribution of light transmitted through the light reflecting film to be uniform.” <i>Id.</i> 6:3-9.</p> <p>“The size of the light reflecting spots may vary with the distance from the light source, as shown in FIG. 5. Also, the light reflecting spots having the same size may be</p>

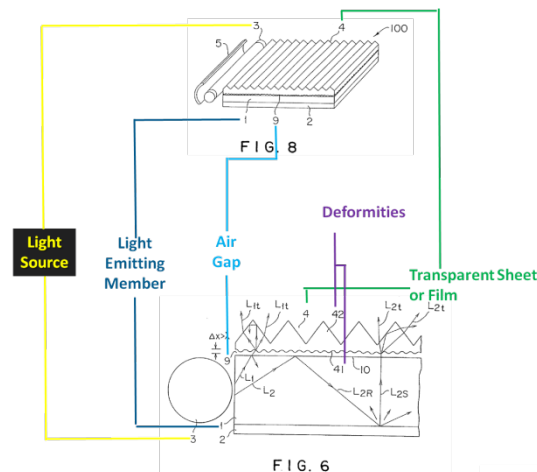
'547 Claim Element	Ohe (Ex. 1007)
	distributed at different distribution density on the transparent film substrate.” <i>Id.</i> 6:56-61. <i>See</i> Escuti Decl., ¶¶102-104.

B. Ground 2: Claims 1, 3, 4, and 16 are Unpatentable Under 35 U.S.C. §102(e) as Being Anticipated by Nishio

Nishio discloses an assembly capable of emitting uniform, high-luminance light within a desired angular range without increasing the power consumption. Ex. 1008, 2:40-45. Like the goal of the '547 Patent, Nishio's similar goal of increasing the efficiency and uniformity of the light emitting assembly makes it unsurprising that Nishio discloses, in a single embodiment, each and every element of claims 1, 3, and 4 of the '547 Patent and therefore, anticipates those claims under 35 U.S.C. §102(e).

For independent claim 1, all of the limitations are met in the annotated figure right, composed of Figs. 6 and 8 of Nishio that are labeled as claim elements:

Nishio discloses a film lens



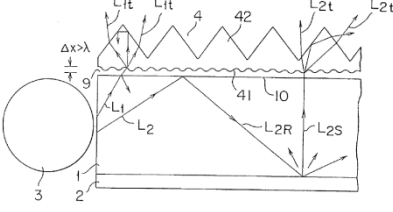
and surface light source with a light guide plate 1, a linear or point light source 3, a lens sheet 4 that includes reflective/refractive surfaces with deformities, an air gap 9 between the light guide plate 1 and lens sheet 4. Ex. 1008, 1:7-12, 4:59-61, 6:29-33, 9:50-54, 9:55-60. Nishio's assembly, which is “capable of emitting uniform, high-

luminance light only within a desired angular range without increasing power consumption or heat release value,” discloses the low loss required by the '547 Patent. *See* Escuti Decl., ¶¶105, 107, 118. Nishio also discloses an air gap (annotated Fig. 6, orange) is formed between the light emitting member (yellow) and the overlying film or sheet, lens sheet 4 as required by claim 1 of the '547 Patent. *See* Escuti Decl., ¶¶112-113.

FIG. 6

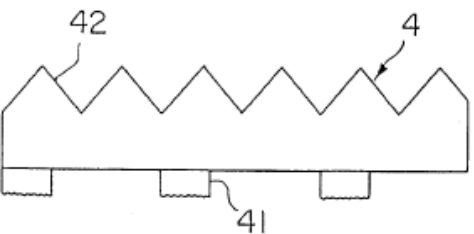
The claim chart below shows a detailed analysis of how each element of claims 1, 3, 4, and 16 of the '547 Patent are anticipated by Nishio. For all these reasons, claims 1, 3, 4, and 16 are unpatentable in view of Nishio and thus, Petitioner has a reasonable likelihood of prevailing with respect to at least one claim.

'547 Claim Element	Nishio (Ex. 1008)
1. A backlight assembly comprising	<p data-bbox="553 243 1435 485">“The present invention relates to a film lens and a surface light source using the same, and more particularly, to a surface light source adapted for back-lighting for a display unit, such as a liquid crystal display unit, illuminated advertising display, traffic-control sign, etc.” Ex. 1008, 1:7-11; <i>see also</i> Fig. 8 below.</p> <div data-bbox="816 506 1179 688" data-label="Image"> </div> <p data-bbox="894 709 992 737">FIG. 8</p> <p data-bbox="553 751 878 789"><i>See</i> Escuti Decl., ¶107.</p>
[1.a] a light emitting member having at least one light emitting area that emits light that is internally reflected within the light emitting member,	<p data-bbox="553 816 1435 1220">“The surface light source according to the first embodiment of the present invention is constructed in the manner shown in the sectional view of FIG. 6 and the perspective view of FIG. 8. More specifically, the light source comprises the <u>light guide plate 1</u>, a linear or point light source 3 located adjacent to at least one spot of the terminal portion of the plate 1, a light reflecting layer 2 on the reverse side of the plate 1, the lens sheet 4 on the opposite side of the plate 1 to the layer 2, at the least.” Ex. 1008, 7:5-13; <i>see also</i> Fig. 6 below.</p> <p data-bbox="553 1247 1435 1661">“The projections 41 are designed so that a gap 9 having a width Δx not smaller than the wavelength of the source light is formed at least partially between a smooth surface 10 of a <u>light guide plate 1</u> and the lens sheet 4, as shown in FIG. 6. If the gap width Δx is smaller than the wavelength of the source light, as mentioned later, <u>satisfactory total reflection of light</u> on the smooth surface 10 of the plate 1 cannot be enjoyed. If the gap width is greater than 10 μm, on the other hand, the indentations of the projections 41 are improperly conspicuous.</p> <p data-bbox="553 1682 1435 1879">The projections 41 may have any rugged contour provided that the above object is achieved. Preferably, however, irregular indentations (e.g., sand-grain patterns, pear-skin patterns, etc.) are formed all over the reverse side of the lens sheet 4, as shown in FIGS. 6, 7, 10 and 11, <u>in order to</u></p>

'547 Claim Element	Nishio (Ex. 1008)
	<p><u>obtain an angular distribution for uniform luminance within a desired diffusion angle and a uniform luminance distribution within the light source plane.</u></p> <p>In this arrangement, the projection group 41 also serves as a light diffusion layer which diffuses light beams L1, L2S, etc. incident upon the reverse side of the lens sheet 4 in an isotropic manner.” <i>Id.</i> 6:29-50; <i>see also</i> Fig. 6 below.</p>  <p style="text-align: center;">FIG. 6</p> <p><i>See</i> Escuti Decl., ¶¶108-110.</p>
<p>[1.b] a separate transparent sheet or film overlying the light emitting area with an air gap therebetween,</p>	<p>“More specifically, the light source comprises the light guide plate 1, a linear or point light source 3 located adjacent to at least one spot of the terminal portion of the plate 1, a light reflecting layer 2 on the reverse side of the plate 1, the <u>lens sheet 4 on the opposite side of the plate 1 to the layer 2, at the least.</u>” Ex. 1008, 7:8-13; <i>see also</i> Fig. 6.</p> <p>“The projections 41 are designed so that a <u>gap 9</u> having a width Δx not smaller than the wavelength of the source light is formed at least partially between a smooth surface 10 of a light guide plate 1 and the lens sheet 4, as shown in FIG. 6.” <i>Id.</i> 6:29-33.</p> <p>“At the <u>gap portion 9</u>, the light guide plate 1, usually having the refractive index of about 1.5, and <u>an air (or vacuum) layer</u> with the refractive index of about 1.0 adjoin each other with the surface 10 as an interface, so that total reflection of light occurs in the same manner as in the case of FIG. 1.” <i>Id.</i> 9:55-60.</p> <p><i>See</i> Escuti Decl., ¶¶111-113.</p>
<p>[1.c] a pattern of deformities on one side of the sheet or film having a width and</p>	<p>“The profile of each unit lens may have the shape of a continuous smooth curve, e.g., <u>circular, elliptic, cardioid, Rankine's-egg-shaped, cycloid, or involute</u>, as shown in FIGS. 13 and 14. Alternatively, the profile may be formed</p>

'547 Claim Element	Nishio (Ex. 1008)
length that is quite small in relation to the width and length of the sheet or film,	<p>of part or whole of a polygon, such as a triangle or hexagon, as shown in FIG. 7.” Ex. 1008, 4:59-64; <i>see also</i> 6:12-23, 9:20-24.</p> <p>“A <u>group of projections 41</u> on the reverse side of the lens sheet, having a profile height not smaller than the wavelength of a source light and not greater than 100 μm, may be formed directly on the reverse side of the integrally molded lens sheet 4 by heat-press embossing, sandblasting, etc., as shown in FIG. 7, or obtained by forming a light transmitting material layer having projections on the flat reverse side of the sheet 4, as shown in FIG. 11.” <i>Id.</i> 6:12-19.</p> <p><i>See</i> Escuti Decl., ¶¶114-116.</p>
[1.d] the deformities varying at different locations on the sheet or film to direct the light that is emitted by the, light emitting member in different directions to produce a desired light output distribution such that the light will pass through a liquid crystal display with low loss.	<p>“The projections 41 may have <u>any rugged contour</u> provided that the above object is achieved. Preferably, however, irregular indentations (e.g., sand-grain patterns, pear-skin patterns, etc.) are formed all over the reverse side of the lens sheet 4, as shown in FIGS. 6, 7, 10 and 11, in order to obtain an angular distribution for uniform luminance within a desired diffusion angle and a uniform luminance distribution within the light source plane. In this arrangement, the <u>projection group 41 also serves as a light diffusion layer which diffuses light beams L1, L2S, etc. incident upon the reverse side of the lens sheet 4 in an isotropic manner.</u>” Ex. 1008, 6:39-50; <i>see also</i> 4:59-64, 6:12-23, 9:20-24, and Fig. 6 above.</p> <p>“In the surface light source of the edge-light type described above, the angle of incidence (angle between the surface 10 and the normal line) of a light beam L1 incident in the vicinity of the light source 3, among other light beams from the light source 3 incident directly upon the smooth surface 10 of the light guide plate 1, becomes narrower than the critical angle, so that <u>a certain proportion of the incident light is emitted as a transmitted light beam L1T, as shown in FIG. 1. As a result, an emitted light beam is formed in the vicinity of the light source.</u>” <i>Id.</i> 9:2-11; <i>see also</i> 9:60-10:2.</p> <p>“The present invention relates to a film lens and a surface light source using the same, and more particularly, to a</p>

'547 Claim Element	Nishio (Ex. 1008)
	<p>surface light source adapted for back-lighting for a display unit, such as a <u>liquid crystal display</u> unit, illuminated advertising display, traffic-control sign, etc.” <i>Id.</i> 1:7-11.</p> <p>“An object of the present invention is to provide a film lens and a surface light source using the same, capable of emitting <u>uniform, high-luminance light</u> only within a desired angular range, and free from variation in luminance depending on the in-plane position.” <i>Id.</i> 2:40-45.</p> <p><i>See</i> Escuti Decl., ¶¶117-118.</p>
<p>3. The assembly of claim 1 wherein the deformities vary in shape at different locations on the sheet or film to direct the light in different directions.</p>	<p>“The profile of each unit lens may have the shape of a continuous smooth curve, e.g., <u>circular, elliptic, cardioid, Rankine's-egg-shaped, cycloid, or involute</u>, as shown in FIGS. 13 and 14. Alternatively, the profile may be formed of part or whole of a polygon, such as a triangle or hexagon, as shown in FIG. 7.” Ex. 1008, 4:59-64; <i>see also</i> 6:12-23, 9:20-24.</p> <p>“The projections 41 may have <u>any rugged contour</u> provided that the above object is achieved.” <i>Id.</i> 6:39-40.</p> <div data-bbox="836 1071 1153 1291"> </div> <p style="text-align: center;">FIG. 7</p> <div data-bbox="568 1354 885 1554"> </div> <p style="text-align: center;">FIG. 13</p> <div data-bbox="990 1354 1323 1554"> </div> <p style="text-align: center;">FIG. 14</p> <p><i>See</i> Escuti Decl., ¶¶120-121.</p>
<p>4. The assembly of claim 1 wherein the deformities vary in</p>	<p>“As shown in FIG. 12, furthermore, the projection group 41 may be <u>composed of spaced dotted patterns, such as mesh patterns, which are distributed within the plate</u>. Since the</p>

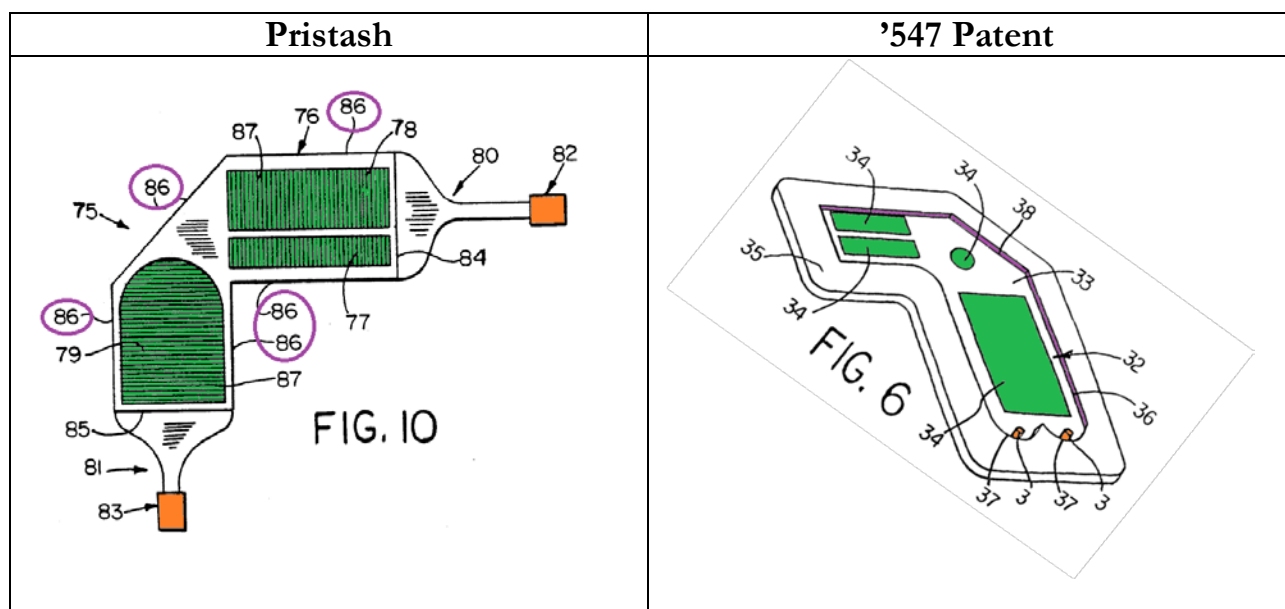
'547 Claim Element	Nishio (Ex. 1008)
<p>placement at different locations on the sheet or film to direct the light in different directions.</p>	<p>patterns 41 arranged in this manner are too conspicuous, however, dispersing the flattening agent in the lens sheet 4 or other measure is required.” Ex. 1008, 6:66-7:4.</p>  <p style="text-align: center;">FIG. 12</p> <p><i>See Escuti Decl., ¶¶123-124.</i></p>
<p>16. The assembly of claim 1 wherein the deformities are at least one of prisms, prismatic and lenticular.</p>	<p>“The profile of each <u>unit lens</u> may have the shape of a continuous smooth curve, e.g., <u>circular, elliptic, cardioid, Rankine's-egg-shaped, cycloid, or involute</u>, as shown in FIGS. 13 and 14. Alternatively, the profile may be formed of part or whole of a polygon, such as a triangle or hexagon, as shown in FIG. 7.” Ex. 1008, 4:59-64; <i>see also</i> 6:12-23, 9:20-24.</p> <p>“A <u>group of projections 41</u> on the reverse side of the lens sheet, having a profile height not smaller than the wavelength of a source light and not greater than 100 μm, may be formed directly on the reverse side of the integrally molded lens sheet 4 by heat-press embossing, sandblasting, etc., as shown in FIG. 7, or obtained by forming a light transmitting material layer having projections on the flat reverse side of the sheet 4, as shown in FIG. 11.” <i>Id.</i> 6:12-19</p> <p><i>See Escuti Decl., ¶¶126-128.</i></p>

C. Ground 3: Claims 1-4, 16, and 26 are Unpatentable Under 35 U.S.C. §103(a) as Being Obvious in View of Pristash

The alleged invention set forth in the '547 Patent “Background of the Invention” is substantially similar to that in Pristash:

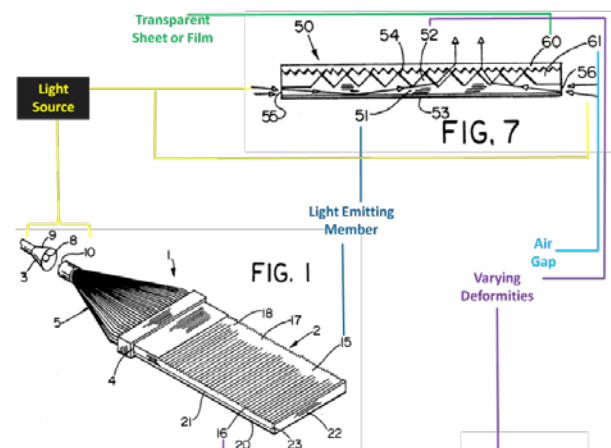
Pristash Background of the Invention	'547 Background of the Invention
<p><u>Light</u> panel illuminators <u>are generally known</u>. However, the <u>present invention</u> relates to several different panel illuminator <u>configurations</u> which are less expensive to make and/or <u>provide for better control over the light output from the panel</u>. Also, the present invention provides <u>more efficient</u> transmission of light from a light source to the light emitting panel.</p>	<p><u>Light</u> emitting panel assemblies <u>are generally known</u>. However, the <u>present invention</u> relates to several different light emitting panel assembly <u>configurations</u> which <u>provide for better control of the light output from the panel</u> assemblies and for <u>more efficient</u> utilization of light, which results in greater light output from the panel assemblies.</p>

The similarities between the Pristash and '547 Patent do not end in their recognition of the prior art and the objectives of the purported inventions. The two patents have a common inventor, Jeffrey Parker, who is a co-inventor of Pristash and the sole inventor for the '547 Patent. Further, Fig. 10 of Pristash and Fig. 6 of the '547 Patent appear strikingly similar in shape and in common elements such as the “light output” regions/areas (green), “light sources” (orange), and “reflective” coatings/surfaces (purple).



Pristash teaches each and every element of claims 1-4, 16, and 26 of the '547 Patent and therefore, renders those claims unpatentable under 35 U.S.C. §103. Pristash teaches several different embodiments of the light emitting panel illuminators. A person of ordinary skill in the art would have been motivated to combine elements of a particular embodiment with other elements of other embodiments disclosed in Pristash for several reasons. First, all of the configurations taught by Pristash aim to be less expensive and provide for “better control over the light output from the panel,” and “more efficient transmission of light from a light source to the light emitting panel.” Ex. 1006, 1:11-16. Second, Pristash specifically acknowledges that “it is obvious that equivalent alterations and modifications will occur to others skilled in the art upon reading and understanding of the specification.” *Id.* 9:3-5. Therefore, it would be obvious to a person of skill in the art to alter one embodiment with a feature taught in the same patent but from a different embodiment. Finally, Pristash does not limit the combination of any of the elements for the embodiments. Specifically, Pristash does not teach away from any combinations of embodiments presented herein.

The elements of independent claim 1 of the '547 Patent are shown in the annotated figure at right, composed of



Figures 1 and 7 of Pristash that are labeled as claim elements.

With respect to claim 1, Pristash teaches a backlight assembly including a solid transparent prismatic film 51 with a light emitting area, light source 3, a second prismatic film 60 which can be replaced by a diffuser or lenticular lens, and an air gap 61. Ex. 1006, 2:68, 5:6-9, 5:22-33. Here, the solid transparent prismatic film 51 functions as the light emitting member, as required by the claim language. *See* Escuti Decl., ¶134. The second prismatic film is the transparent sheet or film overlying the light emitting area and a air gap 61 exists therebetween. Additionally, as previously mentioned, the object of Pristash, much like the object of the '547 Patent, is to provide a panel assembly with more efficient use of light, *i.e.*, low loss. *See id.* ¶131.

With respect to claims 2-4, 16, and 26, the prismatic film 60 functions as the transparent sheet or film, having varying deformities. *See id.* ¶137. The deformities can vary in depth and shape along the length of the prism edges “to produce a desired light output distribution.” Ex. 1006, 4:52-54; *see also* Escuti Decl., ¶¶138, 146-167.

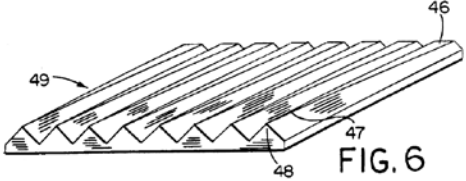
Pristash discloses each and every element of claims 1-4, 16, and 26 of the '547 Patent and therefore those claims are obvious under 35 U.S.C. §103. For all these reasons, claims 1-4, 16, and 26 are unpatentable in view of Pristash and thus, Petitioner has a reasonable likelihood of prevailing with respect to at least one claim.

'547 Claim Element	Pristash (Ex. 1006)
1. A backlight assembly comprising	“Referring now in detail to the drawings, and initially to FIG. 1, there is schematically shown one form of <u>thin panel illuminator</u> in accordance with this invention including a solid transparent light emitting panel 2 and a

'547 Claim Element	Pristash (Ex. 1006)
	<p>light source 3 which generates and focuses light, in a predetermined pattern, either directly on a panel input edge 4 or on a transition device 5 which is used to make the transition from the light source 3 target shape to the light emitting panel input edge 4 shape as shown. The light that is transmitted from the light source 3 to the light emitting panel 2 may be <u>emitted along the length of the panel as desired to produce a desired light output distribution to fit a particular application.</u>” Ex. 1006, 2:64-3:8.</p> <p>“FIG. 7 schematically shows another form of light emitting panel 50 in accordance with this invention which also comprises a solid transparent prismatic film 51 having a prismatic surface 52 on one side and a back reflector 53 on the other side, <u>similar to the light emitting panel 2 shown in FIG. 1.</u>” <i>Id.</i> 5:6-11; <i>see also</i> Figs. 1, 7 below.</p> <div data-bbox="602 926 1409 1178"> <p>The image contains two technical diagrams. FIG. 1 is a perspective view of a light emitting panel 2. It has a light source 3 at one end, which is connected to the panel via a transition device 5. The panel 2 has an input edge 4 and an output edge 6. Light rays are shown emanating from the panel. FIG. 7 is a cross-sectional view of a light emitting panel 50. It consists of a solid transparent prismatic film 51. One side of the film 51 has a prismatic surface 52, and the other side has a back reflector 53. Light rays are shown entering the panel 50 from one edge (55 or 56) and being internally reflected until they strike a deformity (edge 54) where they are emitted. The panel 50 is shown with a wave guide prism edge 54 and a back reflector 53.</p> </div> <p><i>See</i> Escuti Decl., ¶133.</p>
<p>[1.a] a light emitting member having at least one light emitting area that emits light that is internally reflected within the light emitting member,</p>	<p>“FIG. 7 schematically shows another form of light emitting panel 50 in accordance with this invention which also comprises a <u>solid transparent prismatic film 51 having a prismatic surface 52 on one side and a back reflector 53 on the other side,</u> similar to the light emitting panel 2 shown in FIG. 1. <u>Light rays</u> may be caused to enter the panel 50 perpendicular to the wave guide prism edges 54 from one or both edges 55, 56 of the panel, and <u>are internally reflected</u> until they strike a deformity (in this case an edge 54 of panel prismatic surfaces 52) which causes the light rays to be emitted.” Ex. 1006, 5:6-16; <i>see also</i> Figs. 1 and 7 above.</p> <p><i>See</i> Escuti Decl., ¶¶134-136.</p>
<p>[1.b] a separate</p>	<p>“In addition, the panel 50 includes a <u>second prismatic film</u></p>

'547 Claim Element	Pristash (Ex. 1006)
transparent sheet or film overlying the light emitting area with an air gap therebetween,	<p><u>60</u> disposed in close proximity to the panel prismatic surface 52 to shift the angular emission of light toward a particular application. The <u>second prismatic film 60</u> may be separated from the first prismatic film or wave guide 51 <u>by air or an epoxy filled gap 61</u>. If the wave guide 51 and <u>second prismatic film 60</u> are epoxied together, the epoxy 61 must be transparent and have a suitable index of refraction. Also, multiple prismatic films may be used in place of the single prismatic film 60, or the <u>prismatic film 60 may be replaced by a diffuser or lenticular lens or the like.</u>" Ex. 1006, 5:22-33; <i>see also</i> Fig. 7 above.</p> <p><i>See Escuti Decl.</i>, ¶137.</p>
[1.c] a pattern of deformities on one side of the sheet or film having a width and length that is quite small in relation to the width and length of the sheet or film,	<p>"FIG. 5 shows another form of light emitting panel 40 in accordance with this invention comprising a solid transparent prismatic film 41 having <u>deformities 42</u> cut, molded or otherwise formed along the top of the prism edges 43. Although the deformities 42 are shown as being of a <u>generally triangular shape</u>, they may be of any desired shape that causes light to be emitted, and may vary in depth and shape along the length of the prism edges 43 to produce a desired light output distribution." Ex. 1006, 4:45-54; <i>see also</i> Fig. 5 below.</p> <div data-bbox="771 1197 1242 1396" data-label="Image"> </div> <p>"Also, both of the <u>light emitting panels 40 and 49</u> shown in FIGS. 5 and 6 may have <u>prismatic surfaces on both the top and bottom surfaces rather than on just one surface as shown</u>, and one or the other of the top or bottom surface may be provided with a back reflector similar to the back reflector 34 shown in FIG. 4 to redirect emitted light back through the panel toward a particular application." <i>Id.</i> 4:66-5:5; <i>see also</i> Fig. 6 below.</p> <p><i>See Escuti Decl.</i>, ¶¶138-141.</p>
[1.d] the deformities varying at different	<p>"FIG. 5 shows another form of light emitting panel 40 in accordance with this invention comprising a solid</p>

'547 Claim Element	Pristash (Ex. 1006)
<p>locations on the sheet or film to direct the light that is emitted by the, light emitting member in different directions to produce a desired light output distribution such that the light will pass through a liquid crystal display with low loss.</p>	<p>transparent prismatic film 41 having deformities 42 cut, molded or otherwise formed along the top of the prism edges 43. Although the deformities 42 are shown as being of a generally triangular shape, they may be of any desired shape that causes light to be emitted, and <u>may vary in depth and shape along the length of the prism edges 43 to produce a desired light output distribution.</u>" Ex. 1006, 4:45-54; <i>see also</i> Fig. 5 below.</p> <div data-bbox="617 577 1388 829"> <p>FIG. 1 is a perspective view of a light emitting panel 2. A light source 3 is positioned at one end, emitting light through a lens 4. The light passes through a panel 2 which has a series of deformities 16 along its length. The panel 2 is shown with a top surface 18 and a bottom surface 15. The deformities 16 are shown as a series of small, irregular shapes along the length of the panel. FIG. 5 is a perspective view of a light emitting panel 40. It shows a series of prism edges 43 along the length of the panel. Deformities 42 are shown as a series of small, irregular shapes along the top of the prism edges 43. The panel 40 is shown with a top surface 44 and a bottom surface 45.</p> </div> <p><i>Id.</i> Fig. 1 above.</p> <p>"For example, if the exterior surface 18 is mechanically deformed at decreasingly spaced intervals as the distance from the light source 3 increases, there will be more uniform emission of light from the surface 18 when viewed from a distance. Also, such <u>disruptions 16 may vary in depth and shape along the length of the panel 2 to produce a desired light output distribution.</u>" <i>Id.</i> 3:42-48; <i>see also</i> 4:23-37, Fig. 4.</p> <p>"Typical general lighting applications include <u>back lighting of liquid crystal displays</u>" <i>Id.</i> 8:17-24.</p> <p>"[T]he present invention relates to several different panel illuminator configurations which are less expensive to make and/or provide for better control over the light output from the panel. Also, the present invention provides for <u>more efficient transmission of light</u> from a light source to the light emitting panel." <i>Id.</i> 1:10-16.</p> <p><i>See</i> Escuti Decl., ¶¶142-144.</p>
<p>2. The assembly of claim 1 wherein the deformities vary in size at different locations on the sheet or film to direct the</p>	<p>"Also, such disruptions 16 <u>may vary in depth</u> and shape along the length of the panel 2 to produce a desired light output distribution." Ex. 1006, 3:46-48.</p> <p>"FIG. 5 shows another form of light emitting panel 40 in accordance with this invention comprising a solid</p>

'547 Claim Element	Pristash (Ex. 1006)
light in different directions.	<p>transparent prismatic film 41 having deformities 42 cut, molded or otherwise formed along the top of the prism edges 43. Although the <u>deformities 42 are shown as being of a generally triangular shape</u>, they may be of any desired shape that causes light to be emitted, and <u>may vary in depth and shape along the length of the prism edges 43</u> to produce a desired light output distribution.” <i>Id.</i> 4:45-54; <i>see also</i> Fig. 5 above.</p> <p>“Also, both of the light emitting panels 40 and 49 shown in FIGS. 5 and 6 may have <u>prismatic surfaces on both the top and bottom surfaces</u> rather than on just one surface as shown, and one or the other of the top or bottom surface may be provided with a back reflector similar to the back reflector 34 shown in FIG. 4 to redirect emitted light back through the panel toward a particular application.” <i>Id.</i> 4:66-5:5; <i>see also</i> Fig. 6 below.</p>  <p><i>See</i> Escuti Decl., ¶¶146-148.</p>
3. The assembly of claim 1 wherein the deformities vary in shape at different locations on the sheet or film to direct the light in different directions.	<p>“FIG. 5 shows another form of light emitting panel 40 in accordance with this invention comprising a solid transparent prismatic film 41 having <u>deformities 42</u> cut, molded or otherwise formed along the top of the prism edges 43. Although the <u>deformities 42 are shown as being of a generally triangular shape</u>, they <u>may be of any desired shape</u> that causes light to be emitted, and <u>may vary in depth and shape along the length of the prism edges 43</u> to produce a desired light output distribution.” Ex. 1006, 4:45-54; <i>see also</i> Fig. 5 above.</p> <p>“Alternatively, diffuser surfaces 46 may be formed along the top edges 47 of the prismatic surfaces 48 of a prismatic film light emitting panel 49 as schematically shown in FIG. 6. These <u>diffuser surfaces 46</u> may vary in depth and/or width along the length of the panel 49, and <u>may comprise a roughened surface, a lenticular surface, or</u></p>

'547 Claim Element	Pristash (Ex. 1006)
	<p><u>a prismatic surface or the like that consists of multiple surface deformities</u>. A roughened surface, for example, may be produced by grinding, sanding, laser cutting or milling.” <i>Id.</i> 4:57-66.</p> <p>“Also, both of the light emitting panels 40 and 49 shown in FIGS. 5 and 6 may have <u>prismatic surfaces on both the top and bottom surfaces</u> rather than on just one surface as shown, and one or the other of the top or bottom surface may be provided with a back reflector similar to the back reflector 34 shown in FIG. 4 to redirect emitted light back through the panel toward a particular application.” <i>Id.</i> 4:66-5:5; <i>see also</i> Fig. 6 above.</p> <p><i>See</i> Escuti Decl., ¶¶150-153.</p>
<p>4. The assembly of claim 1 wherein the deformities vary in placement at different locations on the sheet or film to direct the light in different directions.</p>	<p>“FIG. 5 shows another form of light emitting panel 40 in accordance with this invention comprising a solid transparent prismatic film 41 having <u>deformities 42</u> cut, molded or otherwise formed along the top of the prism edges 43. Although the deformities 42 are shown as being of a generally triangular shape, they may be of any desired shape that causes light to be emitted, and <u>may vary in depth and shape along the length of the prism edges 43</u> to produce a desired light output distribution.” Ex. 1006, 4:45-54; <i>see also</i> Fig. 5 above.</p> <p>“Alternatively, diffuser surfaces 46 may be formed along the top edges 47 of the prismatic surfaces 48 of a prismatic film light emitting panel 49 as schematically shown in FIG. 6. These <u>diffuser surfaces 46</u> may vary in depth and/or width along the length of the panel 49, and <u>may comprise a roughened surface, a lenticular surface, or a prismatic surface or the like that consists of multiple surface deformities</u>. A roughened surface, for example, may be produced by grinding, sanding, laser cutting or milling.” <i>Id.</i> 4:57-66.</p> <p>“Also, both of the light emitting panels 40 and 49 shown in FIGS. 5 and 6 may have <u>prismatic surfaces on both the top and bottom surfaces</u> rather than on just one surface as shown, and one or the other of the top or bottom surface may be provided with a back reflector similar to the back</p>

'547 Claim Element	Pristash (Ex. 1006)
	<p>reflector 34 shown in FIG. 4 to redirect emitted light back through the panel toward a particular application.” <i>Id.</i> 4:66-5:5; <i>see also</i> Fig. 6 above.</p> <p><i>See</i> Escuti Decl., ¶¶155-158.</p>
<p>16. The assembly of claim 1 wherein the deformities are at least one of prisms, prismatic and lenticular.</p>	<p>“Alternatively, diffuser surfaces 46 may be formed along the top edges 47 of the prismatic surfaces 48 of a prismatic film light emitting panel 49 as schematically shown in FIG. 6. These <u>diffuser surfaces 46</u> may vary in depth and/or width along the length of the panel 49, and <u>may comprise a roughened surface, a lenticular surface, or a prismatic surface or the like that consists of multiple surface deformities</u>. A roughened surface, for example, may be produced by grinding, sanding, laser cutting or milling.” Ex. 1006, 4:57-66.</p> <p><i>See</i> Escuti Decl., ¶¶160-163.</p>
<p>26. The assembly of claim 1 wherein at least some of the deformities have random or varying changes in shape or geometry on the sheet or film to direct the light in different directions.</p>	<p>“FIG. 5 shows another form of light emitting panel 40 in accordance with this invention comprising a solid transparent prismatic film 41 having <u>deformities 42</u> cut, molded or otherwise formed along the top of the prism edges 43. Although the deformities 42 are shown as being of a generally triangular shape, they may be of any desired shape that causes light to be emitted, and <u>may vary in depth and shape along the length of the prism edges 43</u> to produce a desired light output distribution.” Ex. 1006, 4:45-54; <i>see also</i> Fig. 5 above.</p> <p>The <u>size, shape and depth of the wave guide deformities 52</u> may be varied along the length of the panel to produce a desired light output distribution.” <i>Id.</i> 5:17-19.</p> <p>“These diffuser surfaces 46 may vary in depth and/or width along the length of the panel 49, and may comprise a roughened surface, a lenticular surface, or a prismatic surface or the like that consists of multiple surface deformities. A <u>roughened surface, for example, may be produced by grinding, sanding, laser cutting or milling</u>.” <i>Id.</i> 4:60-66.</p> <p><i>See</i> Escuti Decl., ¶¶165-167.</p>

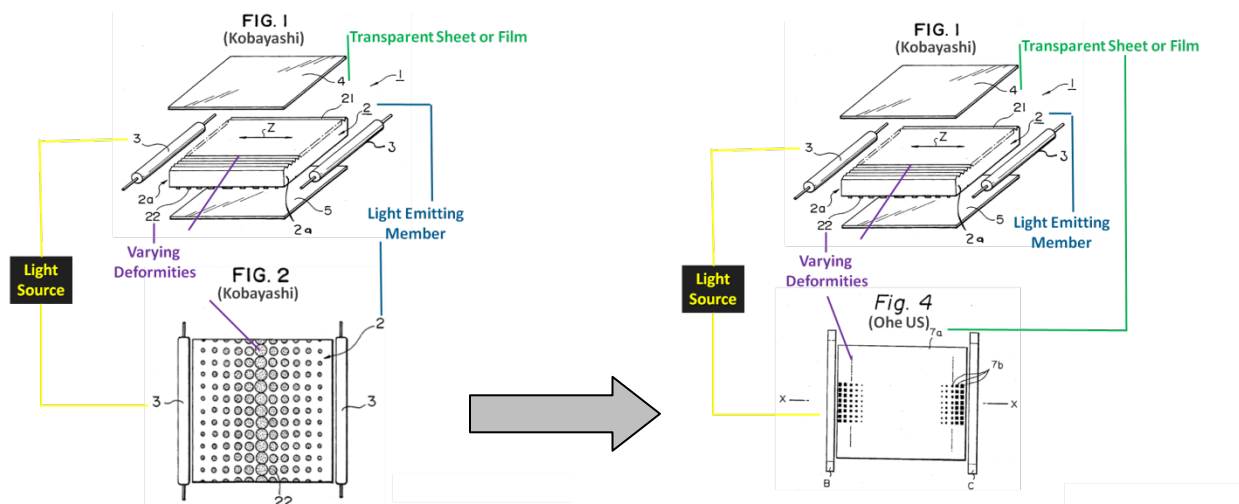
D. Ground 4: Claims 1-4, 16, and 26 are Unpatentable Under 35 U.S.C. §103(a) as Obvious Over Kobayashi in View of Ohe

Kobayashi in view of Ohe discloses each and every element of claims 1-4, 16, and 26 of the '547 Patent and therefore, claims 1-4, 16, and 26 are obvious under 35 U.S.C. §103. Kobayashi is directed to a planar illuminating device that has “increased illuminance” and an “increased uniformity in surface illumination.” Ex. 1009, 2:14-16, 2:59-61. According to Kobayashi, this may be achieved by prismatic cuts on the front surface of the light transmitting plate, a reflecting finish comprising an assembly of spot-shaped layers applied to the rear surface of the light transmitting plate, or a satin finish on the rear surface of the light transmitting plate comprising an assembly of spot-shaped layers applied to the satin finish. *Id.* 2:28-54.

As can be seen in annotated Figure 1 below, prismatic cuts 21 are provided on the front portion of light transmitting plate 2. *Id.* 4:25-26. The rear surface of light transmitting plate 2 contains a reflecting finish, for example, an array of spot-shaped light reflecting layers 22, shown in more detail in annotated Figure 2 below. *Id.* 4:26-29. Light transmitting plate 2 with this arrangement “increases both the surface illuminance and the uniformity in the surface illuminance of diffusing sheet 4.” *Id.* 4:30-32. Kobayashi also provides that a prismatic sheet 6 (a sheet or film overlying the light emitting area) may be provided between the light transmitting plate 2 and light diffusing sheet 4. *Id.* 6:3-10. Prismatic sheet 6 has the same prismatic cuts 21 (deformities) as previously discussed. *Id.* Further, the space between sheets are

clearance regions, which are filled with air. *Id.* 4:9-22.

Elements of claim 1 of the '547 Patent, are shown in the annotated figure below, on the left composed of Figures 1 and 2 of Kobayashi that are labeled as claim elements and on the right Figure 1 of Kobayashi and Figure 4 of Ohe:

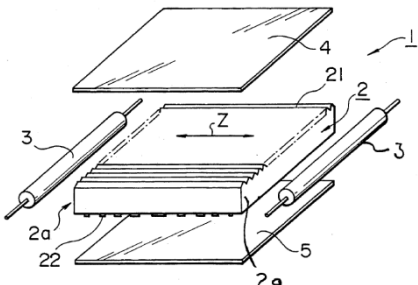


Kobayashi teaches a planar illuminating device 1 (backlight assembly) with tubular fluorescent lamps 3 (light source), a light transmitting plate 2 (light emitting member with light emitting surface), a prismatic sheet 6 with prismatic cuts 21 (deformities), and the deformities for controlling the emitted light such that at least some of the light is redirected to pass through a liquid crystal display with low loss. Ex. 1009, 1:6-9, 2:14-16, 4:3-63, 5:19-37, Figs. 1-2; *see also* Escuti Decl., ¶¶168-171. In Kobayashi, the prismatic sheet 6 overlies the light emitting area with an air gap therebetween and changes the light so the surface luminance and uniformity of light increases, *i.e.*, low loss. *See id.* ¶¶171, 184. Regarding claim 16, Kobayashi discloses the deformities on the overlying sheet 6 may be prismatic. Ex. 1009, 6:3-25.

Regarding claims 2-4 and 26, to the extent Kobayashi is found to not disclose deformities varying in size, shape, and placement, or have random or varying changes in shape or geometry, this is disclosed by Ohe. According to Ohe, deformities on overlying film, light reflecting film 7, may vary in “size, configuration, and distribution density.” Ex. 1007, 6:3-9. It would have been obvious to combine Ohe with Kobayashi because both relate to backlight assemblies, both have the same objective of uniform light emission (Ex. 1007, 8:31-33; Ex. 1009, 2:14-16, 2:59-61), and both disclose using the claimed invention with LCDs (Ex. 1007, 1:15-19; Ex. 1009, 1:6-9).

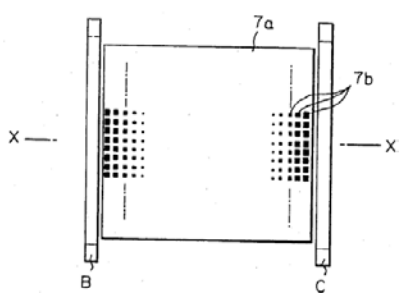
Kobayashi in view of Ohe discloses each and every element of claims 1-4, 16, and 26 of the '547 Patent and therefore those claims are obvious under 35 U.S.C. §103. For all these reasons, claims 1-4, 16, and 26 are unpatentable over Kobayashi in view of Ohe and thus, Petitioner has a reasonable likelihood of prevailing with respect to at least one claim.

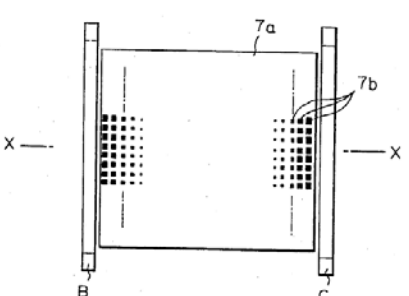
'547 Claim Element	Kobayashi (Ex. 1009) in view of Ohe (Ex. 1007)
1. A backlight assembly comprising	<p data-bbox="586 1325 1430 1444">“FIG. 1 shows a <u>planar illuminating device</u> according to a first embodiment of the present invention.” Ex. 1009, 4:8-9; <i>see also</i> Fig. 1, 1:6-9.</p> <div data-bbox="618 1472 1393 1829"> <p data-bbox="586 1850 987 1885"><i>See Escuti Decl., ¶¶173-174.</i></p> </div>

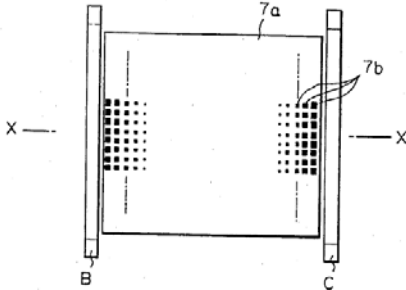
'547 Claim Element	Kobayashi (Ex. 1009) in view of Ohe (Ex. 1007)
<p>[1.a] a light emitting member having at least one light emitting area that emits light that is internally reflected within the light emitting member,</p>	<p>“A planar illuminating device 1 comprises a <u>rectangular light transmitting plate 2</u> of a transparent material such as acrylic resin or polycarbonate. . . .” Ex. 1009, 4:9-21; <i>see also</i> Fig. 1 below.</p> <p>“The prismatic cuts 21 provide faces constiuting an elevation angle to the travel direction of rays of light from the sources of light 3 <u>propogating through the light transmitting plate 2.</u>” <i>Id.</i> 5:19-22.</p> <p style="text-align: center;">FIG. 1</p>  <p><i>See</i> Escuti Decl., ¶175.</p>
<p>[1.b] a separate transparent sheet or film overlying the light emitting area with an air gap therebetween,</p>	<p>“The planar illuminating device 1 according to the third embodiment further provides between the light transmitting plate 2 and the light diffusing 4 a prismatic sheet 6 the front portion of which has substantially the same prismatic cuts as the prismatic cuts 21 but has the axes Y of the prismatic cuts transverse to the axes Z of the prismatic cuts 21.” Ex. 1009, 6:3-10.</p> <p>“A planar illuminating device 1 comprises a rectangular light transmitting plate 2 of a transparent material such as acrylic resin or polycarbonate, a pair of tubular flourescent laps 3, 3 arranged along opposite side edge surfaces 2a, 2a of the light transmitting plate 2, <u>a light diffusing sheet or plate 4 having the same rectangular front surface size as the light trasnmitting plate 2 and arranged to the front surface of the light transmitting plate 2 with a clearance,</u> and a reflecting sheet 5 having the same rectangular front surface size as the light transmitting plate 2 and arranged relative to the rear surface of the light transmitting plate 2 with a clearance. <u>Air fills the clearance regions.</u>” <i>Id.</i> 4:9-22; <i>see also</i> Fig. 1 above.</p>

'547 Claim Element	Kobayashi (Ex. 1009) in view of Ohe (Ex. 1007)
	<i>See</i> Escuti Decl., ¶176.
<p>[1.c] a pattern of deformities on one side of the sheet or film having a width and length that is quite small in relation to the width and length of the sheet or film,</p>	<p>“The planar illuminating device 1 according to the third embodiment further provides between the light transmitting plate 2 and the light diffusing sheet 4 a prismatic sheet 6 the front portion of which has substantially the same prismatic cuts as the prismatic cuts 21 but has the axes Y of the prismatic cuts transverse to the axes Z of the prismatic cuts 21. . . . When the prismatic cuts 21 comprise the hairline grooves or cuts 23 as illustrated in the second embodiment, the prismatic cuts of the prismatic sheet 6 likewise comprise the same hairline cuts or grooves.” Ex. 1009, 6:3-25.</p> <p><u>Ohe</u></p> <p>“A light reflecting film 7 is interposed between the light diffusing plate 6 and the light diffusing layer 3. This light reflecting film 7 consists of a transparent substrate film and a number of light reflecting small spots or small places formed on the transparent substrate film in a pattern effective for evenly distributing the quantity of light transmitted from the base plate 1 to the light diffusing plate 6.” Ex. 1007, 3:45-52.</p> <p>“Usually, the light reflecting film comprises a transparent film substrate and a number of light reflecting small spots or small places formed on the film substrate. The size, configuration, and distribution density of the light reflecting spots are designed so that they cause the distribution of light transmitted through the light reflecting film to be uniform.” <i>Id.</i> 6:3-9; <i>see also</i> Fig. 4 above.</p> <p><i>See</i> Escuti Decl., ¶¶177-181.</p>
<p>[1.d] the deformities varying at different locations on the sheet or film to direct the light that is emitted by the, light emitting member in different directions to</p>	<p>“The planar illuminating device 1 according to the third embodiment further provides between the light transmitting plate 2 and the light diffusing sheet 4 a prismatic sheet 6 the front portion of which has substantially the same prismatic cuts as the prismatic cuts 21 but has the axes Y of the prismatic cuts transverse to the axes Z of the prismatic cuts 21. . . . When the</p>

'547 Claim Element	Kobayashi (Ex. 1009) in view of Ohe (Ex. 1007)
<p>produce a desired light output distribution such that the light will pass through a liquid crystal display with low loss.</p>	<p>prismatic cuts 21 comprise the hairline grooves or cuts 23 as illustrated in the second embodiment, the prismatic cuts of the prismatic sheet 6 likewise comprise the same hairline cuts or grooves.” Ex. 1009, 6:3-25.</p> <p>“In detail, each of the prismatic cuts 21 on the front portion of the light transmitting plate 2 has a <u>triangular cross section</u>The <u>array of spot-shaped reflecting layers 22</u> is made, e.g., of a white paint such as titanium oxide or dioxide or aluminum oxide, or aluminum vapor deposition. . . . Thus, the <u>array of reflecting spots 22</u> increases the reflectance of the central of the rear surface of the <u>light transmitting plate 2</u> at and near the longitudinal axis of the light transmitting plate 2 more so than the reflectance of part near each of the sources of light 3.” <i>Id.</i> 4:33-63; <i>see also</i> 5:1-4.</p> <p>“The <u>prismatic cuts 21</u> provide faces constituting an <u>elevation angle to the travel direction of rays of light from the sources of light 3</u> propagating through the light transmitting plate 2. Since the faces constituting the elevation angle reflect the total rays of light incident upon the faces of the prismatic cuts 21, <u>rays of light totally reflected by the front portion of the light transmitting plate 2 include more component rays of light traveling across the thickness of the light transmitting plate 2 than rays of light totally reflected by the flat front surface of a prior art light transmitting plate do.</u> Rays of light reflected by the array of reflecting spots 22 and the reflecting sheet 5 thus include <u>more component rays of light traveling across the thickness of the light transmitting plate 2</u>, i.e., in the direction of a viewing of an operator of an office automation apparatus comprising the planar illuminating device 1 than rays of light reflected by a reflecting device attached to the rear surface of the prior art light transmitting plate.” <i>Id.</i> 5:19-37; <i>see also</i> Figs. 1, 2 above.</p> <p>“Since the array of reflecting spots 22 is applied directly to the rear surface of the light transmitting plate 2, <u>the array of reflecting spots 22 reflects all of rays of light arriving thereat at the array.</u>” <i>Id.</i> 5:1-4.</p>

'547 Claim Element	Kobayashi (Ex. 1009) in view of Ohe (Ex. 1007)
	<p>“The present invention relates to a planar illuminating device used as a <u>back light for liquid crystal displays</u> of portable office automation apparatuses such as a word processor or a personal computer.” <i>Id.</i> 1:6-9.</p> <p>“The arrangement of the light transmitting plate <u>2</u> <u>increases both the surface illuminance and the uniformity in the surface illuminance</u> of the diffusing sheet 4.” <i>Id.</i> 4:30-32.</p> <p>“Therefore, a primary object of the present invention is to provide a planar illuminating device having an <u>increased illuminance</u>.” <i>Id.</i> 2:14-16.</p> <p><u>Ohe</u></p> <p>“A light reflecting film 7 is interposed between the light diffusing plate 6 and the light diffusing layer 3. This light reflecting film 7 consists of a transparent substrate film and a number of light reflecting small spots or small places formed on the transparent substrate film in a pattern effective for evenly distributing the quantity of light transmitted from the base plate 1 to the light diffusing plate 6.” Ex. 1007, 3:45-52.</p> <p>“Usually, the light reflecting film comprises a transparent film substrate and a number of light reflecting small spots or small places formed on the film substrate. The size, configuration, and distribution density of the light reflecting spots are designed so that they cause the distribution of light transmitted through the light reflecting film to be uniform.” <i>Id.</i> 6:3-9; <i>see also</i> Fig. 4 below.</p> <p style="text-align: center;">Fig. 4</p>  <p>“The light diffusing device of the present invention</p>

'547 Claim Element	Kobayashi (Ex. 1009) in view of Ohe (Ex. 1007)
	<p>provides a <u>highly uniform illumination</u> with evenly scattered light at a <u>reduced optical loss</u>. That is, the light diffusing device of the present invention is extremely useful for a <u>large size display system</u>.” <i>Id.</i> 8:31-35.</p> <p>“Another object of the present invention is to provide a light diffusing device having a <u>significantly decreased optical loss</u>.” <i>Id.</i> 2:34-36.</p> <p><i>See</i> Escuti Decl., ¶¶182-186.</p>
<p>2. The assembly of claim 1 wherein the deformities vary in size at different locations on the sheet or film to direct the light in different directions.</p>	<p>“The planar illuminating device 1 according to the third embodiment further provides between the light transmitting plate 2 and the light diffusing sheet 4 a prismatic sheet 6 the front portion of which has substantially the same prismatic cuts as the prismatic cuts 21 but has the axes Y of the prismatic cuts transverse to the axes Z of the prismatic cuts 21. . . . When the prismatic cuts 21 comprise the hairline grooves or cuts 23 as illustrated in the second embodiment, the prismatic cuts of the prismatic sheet 6 likewise comprise the same hairline cuts or grooves.” Ex. 1009, 6:3-25.</p> <p><u>Ohe</u></p> <p>“Usually, the light reflecting film comprises a transparent film substrate and a number of light reflecting small spots or small places formed on the film substrate. The size, configuration, and distribution density of the light reflecting spots are designed so that they cause the distribution of light transmitted through the light reflecting film to be uniform.” Ex. 1007, 6:3-9; <i>see also</i> Fig. 4 below.</p> <p style="text-align: center;"><i>Fig. 4</i></p> 

'547 Claim Element	Kobayashi (Ex. 1009) in view of Ohe (Ex. 1007)
	<i>See</i> Escuti Decl., ¶¶188-191.
<p>3. The assembly of claim 1 wherein the deformities vary in shape at different locations on the sheet or film to direct the light in different directions.</p>	<p>“The planar illuminating device 1 according to the third embodiment further provides between the light transmitting plate 2 and the light diffusing sheet 4 a prismatic sheet 6 the front portion of which has substantially the same prismatic cuts as the prismatic cuts 21 but has the axes Y of the prismatic cuts transverse to the axes Z of the prismatic cuts 21. . . . When the prismatic cuts 21 comprise the hairline grooves or cuts 23 as illustrated in the second embodiment, the prismatic cuts of the prismatic sheet 6 likewise comprise the same hairline cuts or grooves.” Ex. 1009, 6:3-25.</p> <p><u>Ohe</u></p> <p>“Usually, the light reflecting film comprises a transparent film substrate and a number of light reflecting small spots or small places formed on the film substrate. The size, configuration, and distribution density of the light reflecting spots are designed so that they cause the distribution of light transmitted through the light reflecting film to be uniform.” Ex. 1007, 6:3-9.</p> <p style="text-align: center;"><i>Fig. 4</i></p>  <p><i>See</i> Escuti Decl., ¶¶193-196.</p>
<p>4. The assembly of claim 1 wherein the deformities vary in placement at different locations on the sheet or film to direct the light in different directions.</p>	<p>“The planar illuminating device 1 according to the third embodiment further provides between the light transmitting plate 2 and the light diffusing sheet 4 a prismatic sheet 6 the front portion of which has substantially the same prismatic cuts as the prismatic cuts 21 but has the axes Y of the prismatic cuts transverse to the axes Z of the prismatic cuts 21. . . . When the prismatic cuts 21 comprise the hairline grooves or cuts 23</p>

'547 Claim Element	Kobayashi (Ex. 1009) in view of Ohe (Ex. 1007)
	<p>as illustrated in the second embodiment, the prismatic cuts of the prismatic sheet 6 likewise comprise the same hairline cuts or grooves.” Ex. 1009, 6:3-25.</p> <p><u>Ohe</u></p> <p>“Usually, the light reflecting film comprises a transparent film substrate and a number of light reflecting small spots or small places formed on the film substrate. The size, configuration, and distribution density of the light reflecting spots are designed so that they cause the distribution of light transmitted through the light reflecting film to be uniform.” Ex. 1007, 6:3-9; <i>see also</i> Fig. 4 above.</p> <p><i>See</i> Escuti Decl., ¶¶198-201.</p>
<p>16. The assembly of claim 1 wherein the deformities are at least one of prisms, prismatic and lenticular.</p>	<p>“The planar illuminating device 1 according to the third embodiment further provides between the light transmitting plate 2 and the light diffusing sheet 4 a prismatic sheet 6 the front portion of which has substantially the same <u>prismatic cuts</u> as the prismatic cuts 21 but has the axes Y of the prismatic cuts transverse to the axes Z of the prismatic cuts 21. . . . When the prismatic cuts 21 comprise the hairline grooves or cuts 23 as illustrated in the second embodiment, the prismatic cuts of the prismatic sheet 6 likewise comprise the same hairline cuts or grooves.” Ex. 1009, 6:3-25.</p> <p><i>See</i> Escuti Decl., ¶¶203-205.</p>
<p>26. The assembly of claim 1 wherein at least some of the deformities have random or varying changes in shape or geometry on the sheet or film to direct the light in different directions.</p>	<p>“The planar illuminating device 1 according to the third embodiment further provides between the light transmitting plate 2 and the light diffusing sheet 4 a prismatic sheet 6 the front portion of which has substantially the same <u>prismatic cuts</u> as the prismatic cuts 21 but has the axes Y of the prismatic cuts transverse to the axes Z of the prismatic cuts 21. . . . When the prismatic cuts 21 comprise the hairline grooves or cuts 23 as illustrated in the second embodiment, the prismatic cuts of the prismatic sheet 6 likewise comprise the same hairline cuts or grooves.” Ex. 1009, 6:3-25.</p>

'547 Claim Element	Kobayashi (Ex. 1009) in view of Ohe (Ex. 1007)
	<p><u>Ohe</u></p> <p>“A light reflecting film 7 is interposed between the light diffusing plate 6 and the light diffusing layer 3. This light reflecting film 7 consists of a transparent substrate film and a number of light reflecting small spots or small places formed on the transparent substrate film in a pattern effective for evenly distributing the quantity of light transmitted from the base plate 1 to the light diffusing plate 6.” Ex. 1007, 3:45-52.</p> <p>“Usually, the light reflecting film comprises a transparent film substrate and a number of light reflecting small spots or small places formed on the film substrate. The size, configuration, and distribution density of the light reflecting spots are designed so that they cause the distribution of light transmitted through the light reflecting film to be uniform.” <i>Id.</i> 6:3-9.</p> <p>“The size of the light reflecting spots may vary with the distance from the light source, as shown in FIG. 5. Also, the light reflecting spots having the same size may be distributed at a different distribution density on the transparent film substrate.” <i>Id.</i> 6:57-61.</p> <p><i>See</i> Escuti Decl., ¶¶207-209.</p>

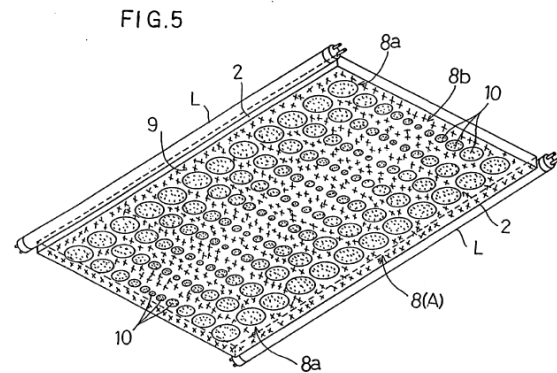
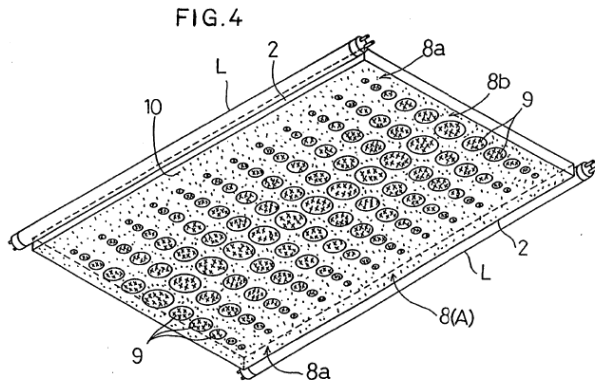
E. Ground 5: Claims 1-4 and 26 are Unpatentable Under 35 U.S.C. §103(a) as Obvious Over Pristash in View of Matsumoto

In the Background of the Invention, the '547 Patent describes the “invention” as light emitting assemblies which provide for better control of the light output and for more efficient utilization of the light, resulting in greater light output. Ex. 1001, 1:20-25. Matsumoto discusses prior art illuminating apparatuses failing to use the light from the light sources effectively and to achieve uniformity in illuminating intensity over the illuminating plane of the apparatus. Ex. 1010, 2:18-30. As

discussed above, Pristash also discloses the objective of more efficient transmission of light. Ex. 1006, 1:14-16. In trying to overcome these same problems, Pristash and Matsumoto disclose similar features and together disclose the limitations of claims 1-4 and 26 of the '547 Patent and therefore claims 1-4 and 26 are obvious under 35 U.S.C. §103.

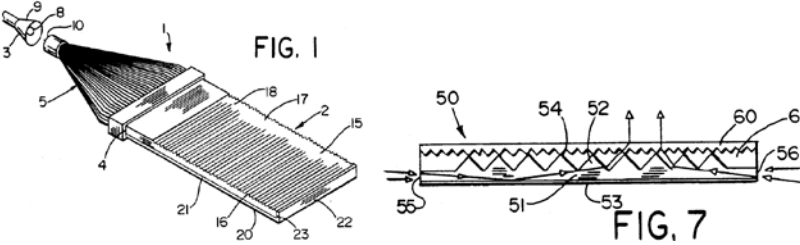
As discussed above, claims 1-4 and 26 are obvious in view of Pristash because it would have been obvious to one of skill in the art to apply the prismatic styles of Figs. 5 and 6 to any prismatic surface, including the second prismatic film 60. *See* Escuti Decl., ¶¶129-167. Additionally, quite small, varying deformities on an overlying transparent sheet or film are disclosed in Matsumoto and one of skill in the art would have been motivated to combine Matsumoto with Pristash. *See* Escuti Decl., ¶¶212, 225.

First, Matsumoto discloses diffusing plane 8, which may be formed on upper or lower surfaces of acrylic plate A. Ex. 1010, 5:47-49, 7:55-56. As can be seen in FIGS. 4 and 5 below, diffusing plane 8 has deformities that are quite small in relation to the length and width of the plane and they vary in shape, size, and placement at different locations on the diffusing plane 8. *See id.* 6:32-42; 7:24-35, 8:30-33; *see also* Escuti Decl., ¶212.



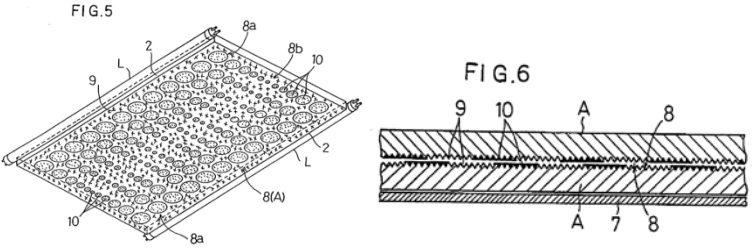
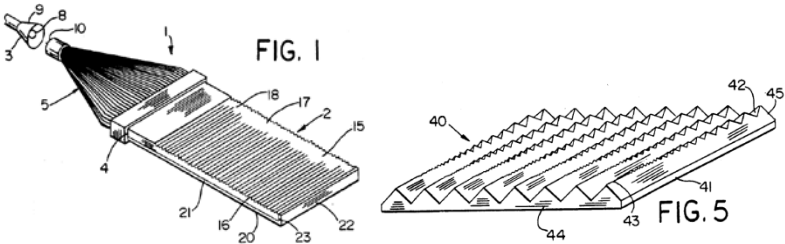
Second, it would have been obvious to combine Matsumoto with Pristash because like Pristash, Matsumoto also discloses an illumination apparatus and both disclose the same objectives of uniform illumination and more efficient transmission of light. Ex. 1006, 1:10-16; Ex. 1010, 3:11-14, 3:63-66; *see also* Escuti Decl., ¶225. It would have been obvious to one of skill in the art to substitute the overlying diffusing plane 8 of Matsumoto with the overlying prismatic film 60 of Pristash because sheets are employed for the purpose of altering the transmission of light out of the light emitting member. Ex. 1006, 5:22-33, Fig. 7; Ex. 1010, 3:6-10; *see also* Escuti Decl., ¶225.

Pristash in view of Matsumoto discloses each and every element of claims 1-4 and 26 of the '547 Patent and therefore those claims are obvious under 35 U.S.C. §103. For all these reasons, claims 1-4 and 26 are unpatentable over Pristash in view of Matsumoto and thus, Petitioner has a reasonable likelihood of prevailing with respect to at least one claim.

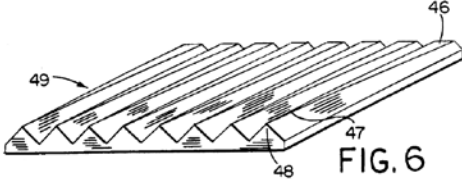
'547 Claim Element	Pristash (Ex. 1006) in view of Matsumoto (Ex. 1010)
1. A backlight assembly comprising	<p>“FIG. 7 schematically shows another form of light emitting panel 50 in accordance with this invention which also comprises a solid transparent prismatic film 51 having a prismatic surface 52 on one side and a back reflector 53 on the other side, <u>similar to the light emitting panel 2 shown in FIG. 1.</u>” Ex. 1006, 5:6-11; <i>see also</i> Figs. 1, 7 below.</p> <p>“Referring now in detail to the drawings, and initially to FIG. 1, there is schematically shown one form of <u>thin panel illuminator</u> in accordance with this invention including a solid transparent light emitting panel 2 and a light source 3 which generates and focuses light, in a predetermined pattern, either directly on a panel input edge 4 or on a transition device 5 which is used to make the transition from the light source 3 target shape to the light emitting panel input edge 4 shape as shown. The light that is transmitted from the light source 3 to the light emitting panel 2 may be <u>emitted along the length of the panel as desired to produce a desired light output distribution to fit a particular application.</u>” <i>Id.</i> 2:64-3:8.</p>  <p>The diagrams show two schematic views of light emitting panels. FIG. 1 is a perspective view of a panel 2 with a light source 3 at one end, connected by a transition device 5 to the input edge 4. The panel has a top surface 15, a bottom surface 20, and side surfaces 16, 17, 18, 19, 21, 22, 23. FIG. 7 is a cross-sectional view of a panel 50 showing a solid transparent prismatic film 51 with a prismatic surface 52 on one side and a back reflector 53 on the other. Light rays enter the panel through edges 55 and 56, are internally reflected by the prismatic surface 52, and exit through edge 54. Other components shown include 51, 52, 53, 54, 55, 56, 60, and 61.</p> <p><i>See Escuti Decl., ¶214.</i></p>
[1.a] a light emitting member having at least one light emitting area that emits light that is internally reflected within the light emitting member,	<p>“FIG. 7 schematically shows another form of light emitting panel 50 in accordance with this invention which also comprises a <u>solid transparent prismatic film 51</u> having a <u>prismatic surface 52 on one side and a back reflector 53 on the other side</u>, similar to the light emitting panel 2 shown in FIG. 1. <u>Light rays</u> may be caused to enter the panel 50 perpendicular to the wave guide prism edges 54 from one or both edges 55, 56 of the panel, and <u>are internally reflected</u> until they strike a deformity (in this case an edge 54 of panel prismatic surfaces 52) which causes the light rays to be emitted.” Ex. 1006, 5:6-16; <i>see</i></p>

'547 Claim Element	Pristash (Ex. 1006) in view of Matsumoto (Ex. 1010)
	<p><i>also</i> Figs. 1 and 7 above.</p> <p><i>See</i> Escuti Decl., ¶¶215-217.</p>
<p>[1.b] a separate transparent sheet or film overlying the light emitting area with an air gap therebetween,</p>	<p>“In addition, the panel 50 includes a <u>second prismatic film 60</u> disposed in close proximity to the panel prismatic surface 52 to shift the angular emission of light toward a particular application. The <u>second prismatic film 60</u> may be separated from the first prismatic film or wave guide 51 <u>by air or an epoxy filled gap 61</u>. If the wave guide 51 and <u>second prismatic film 60</u> are epoxied together, the epoxy 61 must be transparent and have a suitable index of refraction. Also, multiple prismatic films may be used in place of the single prismatic film 60, or the <u>prismatic film 60</u> may be replaced by a diffuser or lenticular lens or the like.” Ex. 1006, 5:22-33; <i>see also</i> Fig. 7 below.</p> <div data-bbox="797 869 1219 1026" data-label="Image"> </div> <p><i>See</i> Escuti Decl., ¶218.</p>
<p>[1.c] a pattern of deformities on one side of the sheet or film having a width and length that is quite small in relation to the width and length of the sheet or film,</p>	<p>“FIG. 5 shows another form of light emitting panel 40 in accordance with this invention comprising a solid transparent prismatic film 41 having <u>deformities 42</u> cut, molded or otherwise formed along the top of the prism edges 43. Although the deformities 42 are shown as being of a <u>generally triangular shape</u>, they may be of any desired shape that causes light to be emitted, and may vary in <u>depth and shape along the length of the prism edges 43</u> to produce a desired light output distribution.” Ex. 1006, 4:45-54; <i>see also</i> Fig. 5 below.</p> <div data-bbox="773 1530 1243 1724" data-label="Image"> </div> <p>“Also, both of the <u>light emitting panels 40 and 49</u> shown in FIGS. 5 and 6 may have <u>prismatic surfaces on both the top and bottom surfaces rather than on just one surface as shown</u>, and one or the other of the top or bottom surface</p>

'547 Claim Element	Pristash (Ex. 1006) in view of Matsumoto (Ex. 1010)
	<p>may be provided with a back reflector similar to the back reflector 34 shown in FIG. 4 to redirect emitted light back through the panel toward a particular application.” <i>Id.</i> 4:66-5:5; <i>see also</i> Fig. 6 below.</p> <div data-bbox="813 415 1209 569" data-label="Image"> </div> <p><u>Matsumoto</u></p> <p>“The diffusing plane 8 may be formed on each of the <u>upper and lower surfaces</u> of the acrylic plate A.” Ex. 1010, 7:55-56.</p> <p>“FIGS. 4 and 5 show reflector regions formed of <u>dot patterns</u>. The <u>diffusing plane 8</u> shown in FIG. 4 includes <u>irregular reflector regions 9</u> formed of a plurality of dots having different sizes. These dots are the <u>smaller towards the end surfaces 2</u> and the larger away therefrom.” <i>Id.</i> 7:24-29; <i>see also</i> Figs. 4 and 5.</p> <p>“The light box may include a plurality of acrylic plates A as shown in FIGS. 6, 7 and 8.” <i>Id.</i> 7:57-58; <i>see also</i> Figs. 6-8.</p> <p>“The <u>plate of transparent</u> or semitransparent optical medium is not limited to the <u>acrylic plate A</u>. Glass or various plastics (e.g. polyethylene, polyester and epoxy resin) may be employed instead.” <i>Id.</i> 8:34-37.</p> <p>“One of the <u>upper and lower surfaces</u> of the acrylic plate A is used to define the diffusing plane 8. First, as shown in FIG. 3 (A), <u>a rugged surface is formed over the entire diffusing plane 8 by sand blasting</u>. This rugged surface has <u>a degree of roughness adjustable</u> by selecting size, blasting intensity, blasting time and the like of an abrasive used in the sand blasting. In fact, what is known as a diffuser plate or diffuser sheet having such a rugged surface already formed is commercially available also. Such a product may be used instead.” <i>Id.</i> 6:32-42.</p>

'547 Claim Element	Pristash (Ex. 1006) in view of Matsumoto (Ex. 1010)
	 <p>FIG. 5 is a perspective view of a light emitting panel 40. It shows a rectangular panel with a grid of circular elements 8a and 8b. A layer 2 is on top, and a layer 10 is on the bottom. A layer 9 is between 2 and 10. A layer 8(A) is also shown. A layer 10 is at the bottom. FIG. 6 is a cross-sectional view of the panel. It shows a layer 9 on top of a layer 10. A layer 8 is on the bottom. A layer 7 is between 8 and 10. A layer 8 is also shown. A layer 9 is on top of 10. A layer 8 is on the bottom. A layer 7 is between 8 and 10. A layer 8 is also shown.</p> <p>See Escuti Decl., ¶¶219-226.</p>
<p>[1.d] the deformities varying at different locations on the sheet or film to direct the light that is emitted by the, light emitting member in different directions to produce a desired light output distribution such that the light will pass through a liquid crystal display with low loss.</p>	<p>“FIG. 5 shows another form of light emitting panel 40 in accordance with this invention comprising a solid transparent prismatic film 41 having deformities 42 cut, molded or otherwise formed along the top of the prism edges 43. Although the deformities 42 are shown as being of a generally triangular shape, they may be of any desired shape that causes light to be emitted, and <u>may vary in depth and shape along the length of the prism edges 43 to produce a desired light output distribution.</u>” Ex. 1006, 4:45-54; <i>see also</i> Figs. 1 and 5 below.</p>  <p>FIG. 1 is a perspective view of a light emitting panel 40. It shows a rectangular panel with a grid of circular elements 8a and 8b. A layer 2 is on top, and a layer 10 is on the bottom. A layer 9 is between 2 and 10. A layer 8(A) is also shown. A layer 10 is at the bottom. FIG. 5 is a cross-sectional view of the panel. It shows a layer 9 on top of a layer 10. A layer 8 is on the bottom. A layer 7 is between 8 and 10. A layer 8 is also shown. A layer 9 is on top of 10. A layer 8 is on the bottom. A layer 7 is between 8 and 10. A layer 8 is also shown.</p> <p>“For example, if the exterior surface 18 is mechanically deformed at decreasingly spaced intervals as the distance from the light source 3 increases, there will be more uniform emission of light from the surface 18 when viewed from a distance. Also, such <u>disruptions 16 may vary in depth and shape along the length of the panel 2 to produce a desired light output distribution.</u>” <i>Id.</i> 3:42-48; <i>see also</i> 4:23-37, Fig. 4.</p> <p>“Typical general lighting applications include <u>back lighting of liquid crystal displays</u>” <i>Id.</i> 8:17-24.</p> <p>“[T]he present invention relates to several different panel illuminator configurations which are less expensive to make and/or provide for better control over the light</p>

'547 Claim Element	Pristash (Ex. 1006) in view of Matsumoto (Ex. 1010)
	<p>output from the panel. Also, the present invention provides for <u>more efficient transmission of light</u> from a light source to the light emitting panel.” <i>Id.</i> 1:10-16.</p> <p><u>Matsumoto</u></p> <p>“The diffusing plan 8 shown in FIG. 5 includes <u>a plurality of dots having different sizes and formed in portions</u> other than the irregular reflector regions 9. These dots provide the modified irregular reflector regions 10, which are the larger toward the end surfaces 2 and the smaller away therefrom.” Ex. 1010, 7:30-35; <i>see also</i> FIGS. 4 and 5.</p> <p>“Thus, the present invention provides a method of easily and quickly manufacturing an edge light conductor having a <u>high efficiency</u> of irregular reflection and assuring bright edge light.” <i>Id.</i> 3:63-66.</p> <p>“The illuminating apparatus is not limited to the ultra-thin light box, but may comprise a <u>backlight apparatus for a display device or for a liquid crystal display</u> of an office automation product, for example.” <i>Id.</i> 7:67-8:2.</p> <p><i>See</i> Escuti Decl., ¶¶227-232.</p>
<p>2. The assembly of claim 1 wherein the deformities vary in size at different locations on the sheet or film to direct the light in different directions.</p>	<p>“Also, such disruptions 16 <u>may vary in depth</u> and shape along the length of the panel 2 to produce a desired light output distribution.” Ex. 1006, 3:46-48.</p> <p>“FIG. 5 shows another form of light emitting panel 40 in accordance with this invention comprising a solid transparent prismatic film 41 having deformities 42 cut, molded or otherwise formed along the top of the prism edges 43. Although the <u>deformities 42 are shown as being of a generally triangular shape</u>, they may be of any desired shape that causes light to be emitted, and <u>may vary in depth and shape along the length of the prism edges 43.</u>” <i>Id.</i> 4:45-54; <i>see also</i> Fig. 5 above.</p> <p>“Also, both of the light emitting panels 40 and 49 shown in FIGS. 5 and 6 may have <u>prismatic surfaces on both the top and bottom surfaces</u> rather than on just one surface as shown, and one or the other of the top or bottom surface</p>

'547 Claim Element	Pristash (Ex. 1006) in view of Matsumoto (Ex. 1010)
	<p>may be provided with a back reflector similar to the back reflector 34 shown in FIG. 4 to redirect emitted light back through the panel toward a particular application.” <i>Id.</i> 4:66-5:5; <i>see also</i> Fig. 6 below.</p>  <p>Matsumoto</p> <p>“FIGS. 4 and 5 show reflector regions formed of dot patterns. The diffusing plane 8 shown in FIG. 4 includes irregular reflector regions 9 formed of a <u>plurality of dots having different sizes</u>. These dots are the <u>smaller towards the end surfaces 2 and the larger away therefrom</u>.” Ex. 1010, 7:24-29.</p> <p>“The diffusing plan 8 shown in FIG. 5 includes <u>a plurality of dots having different sizes</u> and formed in portions other than the irregular reflector regions 9. These dots provide the modified irregular reflector regions 10, which are the larger toward the end surfaces 2 and the smaller away therefrom.” <i>Id.</i> 7:30-35; <i>see also</i> FIGS. 4 and 5.</p> <p><i>See</i> Escuti Decl., ¶¶235-239.</p>
<p>3. The assembly of claim 1 wherein the deformities vary in shape at different locations on the sheet or film to direct the light in different directions.</p>	<p>“Although the <u>deformities 42</u> are shown as being of a <u>generally triangular shape</u>, they <u>may be of any desired shape</u> that causes light to be emitted, and <u>may vary in depth and shape along the length of the prism edges 43</u> to produce a desired light output distribution.” Ex. 1006, 4:49-54; <i>see also</i> Fig. 5 above.</p> <p>“These <u>diffuser surfaces 46</u> may vary in depth and/or width along the length of the panel 49, and <u>may comprise a roughened surface, a lenticular surface, or a prismatic surface or the like that consists of multiple surface deformities</u>. A roughened surface, for example, may be produced by grinding, sanding, laser cutting or milling.” <i>Id.</i> 4:60-66.</p> <p>“Also, both of the light emitting panels 40 and 49 shown</p>

'547 Claim Element	Pristash (Ex. 1006) in view of Matsumoto (Ex. 1010)
	<p>in FIGS. 5 and 6 may have <u>prismatic surfaces on both the top and bottom surfaces</u> rather than on just one surface as shown, and one or the other of the top or bottom surface may be provided with a back reflector similar to the back reflector 34 shown in FIG. 4 to redirect emitted light back through the panel toward a particular application.” <i>Id.</i> 4:66-5:5; <i>see also</i> Fig. 6 above.</p> <p><u>Matsumoto</u></p> <p>“As noted in the first embodiment, the irregular reflector regions 9 are <u>not limited to the ship-shape patterns, but may be in the form of triangles, groups of lines, or dots.</u>” Ex. 1010, 8:30-33; <i>see also</i> FIGS. 4 and 5.</p> <p>“The modified irregular reflector regions 10 may be <u>formed in only certain of the parts</u> of the diffusing plane 8 where the irregular reflector regions 9 are not formed. The quantity of irregular reflection from the modified irregular reflector regions 10 <u>need not be uniform</u> through the diffusing plane 8. <u>Plural types of modified irregular reflector regions 10</u> providing varied quantities of irregular reflection may be distributed over the diffusing plane 8.” <i>Id.</i> 7:46-54.</p> <p><i>See</i> Escuti Decl., ¶¶241-246.</p>
<p>4. The assembly of claim 1 wherein the deformities vary in placement at different locations on the sheet or film to direct the light in different directions.</p>	<p>“Although the <u>deformities 42 are shown as being of a generally triangular shape</u>, they <u>may be of any desired shape</u> that causes light to be emitted, and <u>may vary in depth and shape along the length of the prism edges 43</u> to produce a desired light output distribution.” Ex. 1006, 4:49-54; <i>see also</i> Fig. 5 above.</p> <p>“These <u>diffuser surfaces 46</u> may vary in depth and/or width along the length of the panel 49, and <u>may comprise a roughened surface, a lenticular surface, or a prismatic surface or the like that consists of multiple surface deformities.</u> A roughened surface, for example, may be produced by grinding, sanding, laser cutting or milling.” <i>Id.</i> 4:60-66.</p> <p>“Also, both of the light emitting panels 40 and 49 shown in FIGS. 5 and 6 may have <u>prismatic surfaces on both the</u></p>

'547 Claim Element	Pristash (Ex. 1006) in view of Matsumoto (Ex. 1010)
	<p><u>top and bottom surfaces</u> rather than on just one surface as shown, and one or the other of the top or bottom surface may be provided with a back reflector similar to the back reflector 34 shown in FIG. 4 to redirect emitted light back through the panel toward a particular application.” <i>Id.</i> 4:66-5:5; <i>see also</i> Fig. 6 above.</p> <p><u>Matsumoto</u></p> <p>“FIGS. 4 and 5 show reflector regions formed of dot patterns. The diffusing plane 8 shown in FIG. 4 includes irregular reflector regions 9 formed of a plurality of dots having different sizes. These dots are the <u>smaller towards the end surfaces 2 and the larger away therefrom.</u>” Ex. 1010, 7:24-29.</p> <p>“The diffusing plan 8 shown in FIG. 5 includes <u>a plurality of dots having different sizes and formed in portions other than the irregular reflector regions 9.</u> These dots provide the modified irregular reflector regions 10, which are the larger toward the end surfaces 2 and the smaller away therefrom.” <i>Id.</i> 7:30-35; <i>see also</i> FIGS. 4 and 5.</p> <p>“The modified irregular reflector regions 10 may be <u>formed in only certain of the parts</u> of the diffusing plane 8 where the irregular reflector regions 9 are not formed. The quantity of irregular reflection from the modified irregular reflector regions 10 <u>need not be uniform</u> through the diffusing plane 8. Plural types of modified irregular reflector regions 10 providing <u>varied quantities of irregular reflection</u> may be distributed over the diffusing plane 8.” <i>Id.</i> 7:46-54.</p> <p><i>See</i> Escuti Decl., ¶¶248-253.</p>
26. The assembly of claim 1 wherein at least some of the deformities have random or varying changes in shape or geometry on the sheet or film to direct the light in different directions.	<p>The <u>size, shape and depth of the wave guide deformities 52 may be varied</u> along the length of the panel to produce a desired light output distribution.” Ex. 1006, 5:17-19.</p> <p>“These diffuser surfaces 46 may vary in depth and/or width along the length of the panel 49, and may comprise a roughened surface, a lenticular surface, or a prismatic surface or the like that consists of multiple surface deformities. A <u>roughened surface, for example, may be</u></p>

'547 Claim Element	Pristash (Ex. 1006) in view of Matsumoto (Ex. 1010)
	<p data-bbox="586 239 1437 317"><u>produced by grinding, sanding, laser cutting or milling.”</u> <i>Id.</i> 4:60-66.</p> <p data-bbox="586 338 769 373"><u>Matsumoto</u></p> <p data-bbox="586 394 1437 558">“As noted in the first embodiment, the irregular reflector regions 9 are <u>not limited to the ship-shape patterns, but may be in the form of triangles, groups of lines, or dots.”</u> Ex. 1010, 8:30-33; <i>see also</i> FIGS. 4 and 5.</p> <p data-bbox="586 579 1437 821">“The quantity of irregular reflection from the modified irregular reflector regions 10 need <u>not be uniform</u> through the diffusing plane 8. <u>Plural types of modified irregular reflector regions 10</u> providing varied quantities of irregular reflection may be distributed over the diffusing plane 8.” <i>Id.</i> 7:49-54.</p> <p data-bbox="586 842 987 877"><i>See</i> Escuti Decl., ¶¶255-260.</p>

VIII. CONCLUSION

Substantial, new, and noncumulative technical teachings have been presented for each of claims 1-4, 16, and 26. For these reasons, and the disclosures identified in the claim charts above, the references above teach and suggest the subject matter of the '547 Patent in such a manner that the Petitioner is likely to prevail in showing that the alleged invention embodied in claims 1-4, 16, and 26 of the '547 Patent was described by others prior to the effective filing date of the '547 Patent. Accordingly, the Petitioner requests that the Board grant this petition for *inter partes* review.

Dated: December 4, 2014

Respectfully submitted,

/Scott T. Weingaertner Reg. No. 37756/

Scott T. Weingaertner

Registration No. 37,756

King & Spalding LLP

1185 Avenue of the Americas

New York, NY 10036-2601

Tel.: (212) 556-2227

Fax: (212) 556-2222

Email: sweingaertner@kslaw.com

Natasha H. Moffitt

Registration No. 53,340

King & Spalding LLP

1180 Peachtree Street, NE

Atlanta, GA 30309

Tel.: (404) 572-2783

Fax: (404) 572-5134

Email: nmoffitt@kslaw.com

*Counsel for Mercedes-Benz USA, LLC and
Mercedes-Benz U.S. International, Inc.*

CERTIFICATE OF SERVICE

The undersigned certifies that, on this 4th day of December, 2014, a true and correct copy of the foregoing PETITION FOR INTER PARTES REVIEW OF CLAIMS 1-4, 16, AND 26 OF U.S. PATENT NO. 6,755,547 together with all exhibits and PETITIONER POWER OF ATTORNEY was served by UPS NEXT DAY AIR on the attorney of record for the patent owner, with a courtesy copy being sent by electronic mail to the attorneys of record in the co-pending litigation, at the following addresses:

**Attorney of
Record for Patent
Owner:**

Donald L. Otto, Esq.
Renner, Otto, Boisselle & Sklar, LLP
1621 Euclid Avenue
19th Floor
Cleveland, OH 44115

**Attorneys of
Record In Co-
Pending
Litigation:**

Jeffrey R. Bragalone
Patrick J. Conroy
Justin B. Kimble
T. William Kennedy, Jr.
Daniel F. Olejko
Bragalone Conroy PC
2200 Ross Avenue
Suite 4500W
Dallas, TX 75201
jbragalone@bcpc-law.com
pconroy@bcpc-law.com
jkimble@bcpc-law.com
bkennedy@bcpc-law.com
dolejko@bcpc-law.com

T. John Ward Jr

Claire Abernathy Henry
Ward & Smith Law Firm
1127 Judson Road, Suite 220
Longview, TX 75601
jw@wsfirm.com
claire@wsfirm.com

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/Scott T Weingaertner/
Scott T. Weingaertner
Registration No. 37,756
King & Spalding LLP
1185 Avenue of the Americas
New York, NY 10036-2601
(212) 556-2227 (telephone)
(212) 556-2222 (fax)
sweingaertner@kslaw.com (email)