

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Hisense USA Corporation

Petitioner

v.

Brightplus Ventures LLC

Patent Owner

Case IPR2023-01385

U.S. Patent No. 7,690,812

Ex. 2001 - Declaration of William Bohannon

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EXHIBIT LIST

Exhibit	Description
2001	Declaration of William K. Bohannon (“Bohannon Decl.”)
2002	Curriculum vitae of William K. Bohannon
2003	Joint Claim Construction Statement
2004	Brightplus Ventures LLC’s Opening Claim Construction Brief
2005	Hisense’ Opening Claim Construction Brief

I, William K. Bohannon, hereby declare under penalty of perjury:

I. INTRODUCTION

1. I am an independent consultant. I am over eighteen years of age, and I would otherwise be competent to testify as to the matters set forth herein if I am called upon to do so.

2. I have prepared this Declaration for consideration by the Patent Trial and Appeal Board in the Inter Partes Reviews of U.S. Patent No. 7,690,812 (“the ’812 Patent”).

3. I provide this Declaration at the request of and have been retained by Ni, Wang & Massand, PLLC, which represents Patent Owner Brightplus Ventures LLC (“Brightplus” or “Patent Owner”) in connection with the above-captioned Inter Partes Review.

4. I have been informed and understand that Petitioner Hisense USA Corporation (“Hisense” or “Petitioner”) contends that claims 1-7, 10-12, 14-21, and 23 of the ’812 Patent are invalid based on Grounds 1-3.

5. I am being compensated at an hourly rate of \$350 per hour. My compensation is not dependent on the outcome of or any issue in relation to the above-captioned Inter Partes Review, and I have no interest in either party.

6. In forming my opinions, I relied on my knowledge, education, experience, and training in the field and on documents and information referenced in this Declaration.

A. Expert Qualifications

7. My curriculum vitae (“CV”) is attached hereto as Exhibit 2002 and provides an accurate identification of my background and experience.

8. I have over (30) years of commercial industrial electronics experience including experience in the areas of LCD, Plasma, CRT and Large Screen Display Equipment: LCD manufacturing, substrates, drivers and other related components for rear screen displays including Avionics and cockpit displays.

9. From 1989 to 1994 I worked as a Chief Scientist for Display Products which included tracking liquid crystal display (LCD) and other display technology worldwide with a special emphasis on Japan and working closely with several Japanese companies and laboratories to develop new products and test existing LCD products.

10. Since 1994, I have been an independent consultant for Manx Research working on various display products including managing and conducting detailed technical product evaluations for all kinds of display products – LCD, CRT, Plasma and LED direct view, projection products of all types, CRT products and plasma products. Furthermore, I was also a design and procurement consultant to an

aerospace display company involved in re-designing Avionic LCD display sub-systems to use full color LED light sources instead of short arc lamps.

11. I also have 7 issued U.S. Patents in displays and display technology.

B. Basis of My Opinion and Materials Considered

12. I have reviewed the '812 Patent, including the claims of the patent in view of the specification. In addition, I have reviewed the '812 Patent's prosecution history, Dr. Pattison's declaration (Ex. 1003), the prior art discussed herein, and the remaining exhibits listed herein.

C. Summary of Opinions

13. In my opinion, claims 1-7, 10-12, 14-21, and 23 of the '812 Patent are not rendered obvious by the prior art combinations cited in Grounds 1-3. In the remainder of this declaration, I demonstrate these in detail and also address the lack of motivation to combine certain references.

II. LEGAL STANDARDS TO BE APPLIED

14. Counsel has advised me of the following legal standards that are relevant to IPR proceedings, which I have applied in forming my opinions.

15. I understand that an inter partes review ("IPR") is a proceeding before the United States Patent & Trademark Office for evaluating the patentability of an issued patent's claims based on prior-art patents and printed publications.

A. Person of Ordinary Skill in the Art

16. I understand that the claims of a patent are reviewed from the point of view of a hypothetical person of ordinary skill in the art (“POSITA”) at the time of the filing of the patent. The “art” is the field of technology to which a patent relates.

B. Claim Construction

17. I understand that, in IPR proceedings, claim terms in a patent are given their ordinary and customary meaning as understood by a POSITA in the context of the entire patent and the prosecution history pertaining to the patent. If the specification provides a special definition for a claim term that differs from the meaning the term would otherwise possess, the specification’s special definition controls. I have applied these standards in preparing the opinions in this declaration.

C. Validity

18. I understand that, in this proceeding, Petitioner has the burden of proving that the challenged claims of the ’812 Patent are unpatentable by a preponderance of the evidence. I understand that “preponderance of the evidence” means that a fact or conclusion is more likely true than not true.

19. I understand that there are two ways in which prior art may render a patent claim unpatentable. First, the prior art can “anticipate” the claim. Second, the prior art can render the claim “obvious” to a POSITA. I understand that for an invention claimed in a patent to be patentable over the prior art, it must not be

anticipated and must not be obvious based on what was known before the invention was made.

20. I understand that a patent claim may be invalid as anticipated under 35 U.S.C. § 102 if a prior art reference discloses each element of the claimed subject matter.¹

21. I understand that a patent claim may be invalid as obvious under 35 U.S.C. § 103 if the differences between the subject matter claimed and the prior art are such that the claimed subject matter as a whole would have been obvious to a POSITA at the time the invention was made. I also understand that several factual inquiries underlie a determination of obviousness. These inquiries include (1) the scope and content of the prior art, (2) the level of ordinary skill in the field of the invention, (3) the differences between the claimed invention and the prior art, and (4) any objective evidence of non-obviousness (i.e., “secondary considerations”).

22. I further understand that when a party alleges obviousness, that party may rely on one reference or a combination of multiple references. I also understand that, when a party alleges obviousness based on a combination of references, that party should identify a reason why a POSITA would have been motivated to combine the asserted references in the manner recited in the claims and to explain

¹ Patent laws discussed herein refer to AIA versions of the relevant laws.

why a POSITA would have had a reasonable expectation of success in making such combinations.

23. I understand that an obviousness analysis permits the application of “common sense” in examining whether a claimed invention would have been obvious to a POSITA. For example, I understand that combining familiar elements according to known methods and in a predictable way may suggest obviousness when such a combination would yield nothing more than predictable results. And I understand a party asserting obviousness should still provide a specific motivation to combine the references as recited in the claims and explain why one would have reasonably expected to succeed in doing so.

24. I understand that one indicator of nonobviousness is when prior art teaches away from combining certain known elements. For example, a prior art reference teaches away from the patent’s particular combination if it leads in a different direction or discourages that combination, recommends steps that would not likely lead to the patent’s result, or otherwise indicates that a seemingly inoperative device would be produced.

III. TECHNOLOGY OVERVIEW

25. The relevant field for that of the ’812 Patent is that of solid-state lighting systems, and more particularly to solid state lighting tiles and/or panels.

Generally, the field relates to diffusing solid state light emitters to achieve optimal illumination of an LCD panel.

26. This may be accomplished through the employment of a multiplane light diffuser having at a first diffusion plane a first distance from the solid state emitters and a second diffusion plane that is a second distance from the solid state emitters and a third distance between adjacent ones of the plurality of solid state light emitters, such that the first distance is a function of the third distance.

IV. THE '812 PATENT'S OVERVIEW

27. The '812 Patent applies to a solid state lighting tile that includes a substrate, solid state light elements mount of the substrate, and a reflector on a surface of the substrate.

28. As show in Fig. 3 of the '812 Patent:

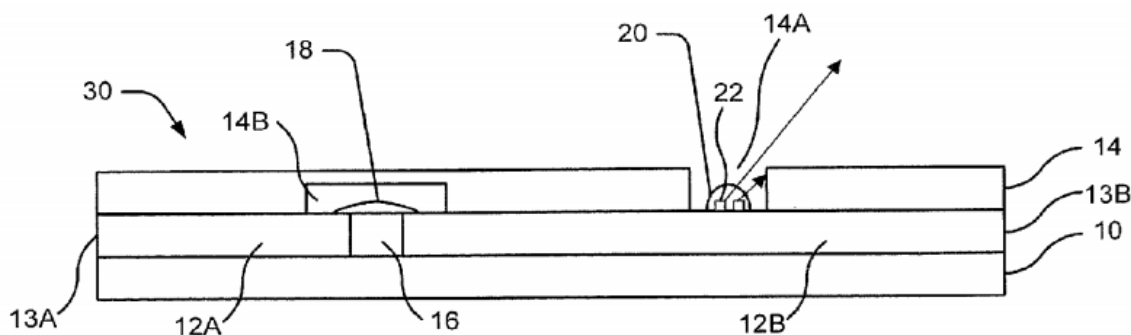


FIGURE 3

29. The '812 further discloses that “the reflector sheet of yet[sic] further embodiments can be configured to conform to a shape of a protruding feature on the tile.” '812 Patent, 1:57-59 “The tile 12B also includes a reflector sheet 14,

configured to reflect and diffuse light transmitted from the emitter 20.” *Id.*, 4:59-60

Additionally, the ’812 Patent describes many different embodiments in which the reflector is on the substrate, such as “a reflector sheet 14 may be mounted on the multiple bars” *Id.*, 5:5-7. “A solid state lighting bar 30...can include a support member 10, on which is provide a solid state lighting tile substrate 13B that corresponds to solid state lighting tile 12B. The tile 12B can also include a solid state emitter mounted on the surface of the substrate” *Id.*, 4:52-63.

30. Additionally, the ’812 Patent describes a variety of protruding features over which the reflector may be configured to conform. These include wire interconnects and other features on the tiles, “[t]he substrates 13A, 13B can also include surface protrusions, such as, for example, a large wire interconnect (LWI)” *Id.*, 4:62 – 64; “The LWI 18 is but one example of a surface protrusion that can occur on a surface of the tile substrate.” *Id.*, 5:48-50.

V. A PERSON OF ORDINARY SKILL IN THE ART

31. I understand that the factors considered in determining the ordinary level of skill in a field of art at issue include the level of education and experience of persons working in the field; the types of problems encountered in the field; and the sophistication of the technology at the time of the purported invention, which I understand to be as early as March 16, 2007. I understand that a person of ordinary skill in the art (“POSITA”) is not a specific real individual, but rather is a

hypothetical individual having the qualities reflected by the factors above. I understand that a POSITA would also have knowledge from the teachings of the prior art, including the art cited below.

32. Based on these factors, on or before March 16, 2007, a POSITA relating to the technology of the '812 Patent would have (a) a Bachelor's of Science degree in a technical field and at least four years of experience in the field of design and/or manufacture of display systems; (b) a Master's of Science degree in a technical field and at least two years of experience in the field of design and/or manufacture of display systems; or (c) a PhD in a technical field relating to the design and/or manufacture of display systems. Additional graduate education could substitute for professional experience, or significant experience in the field could substitute for formal education. A POSITA is presumed to have knowledge of all relevant prior art, and therefore would have been familiar with each of the references cited in this declaration and the full range of teachings they contain.

33. With respect to the subject matter of the '812 Patent, a Bachelor of Art in Mathematics is equivalent to a Bachelor of Science degree in a technical field.

34. Before March 16, 2007, my level of skill in the art was at least that of a POSITA. I am qualified to provide opinions concerning what a POSITA would have known and understood at that time, and my analysis and conclusions in this declaration are from the perspective of a POSITA prior to March 16, 2007.

Furthermore, I have taught, worked with and supervised persons whom I would consider to be persons of ordinary skill in the art according with the description given above.

VI. CLAIM CONSTRUCTION

35. For IPR petitions filed after November 13, 2018, I understand the Patent Trial and Appeal Board (“Board”) construes claim terms as having their ordinary and customary meaning to a POSITA at the time of invention (i.e., the same standard used in district court). I have applied this standard in rendering my opinions on claim construction. In addition, I have been asked to assume that the claims are not indefinite.

36. Claim terms are generally given their plain and ordinary meaning, which is the meaning that the term would have to a person of ordinary skill in the art in question at the time of the invention. When the words in the context of the surrounding claim language make the ordinary meaning readily apparent, claim construction involves little more than the application of the widely accepted meaning of commonly understood words.

37. The claims must be read in view of the specification of which they are a part. The specification is the best source for understanding a technical term. The construction that stays true to the claim language and most naturally aligns with the patent’s description of the invention will be, in the end, the correct construction.

38. Although terms must be construed in light of the specification, it is improper to import a limitation from the specification into the claims. Courts must capture the scope of the actual invention, rather than strictly limit the scope of claims to disclosed embodiments or allow the claim language to become divorced from what the specification conveys is the invention.

39. The prosecution history can often inform the meaning of the claim language by demonstrating how the inventor understood the invention and whether the inventor limited the invention in the course of prosecution, making the claim scope narrower than it would otherwise be. The prosecution history consists of the complete record of the proceedings before the PTO and includes the prior art cited during the examination of the patent.

40. I understand that in the parallel district court litigation, Hisense has proposed a construction for the terms [reflector sheet] “configured to conform to a shape of a feature” and protruding “reflector sheet configured to conform to a shape of a protruding feature on the [solid state lighting] tile.”

41. I agree with Patent Owner that the term would be understood based on its plain and ordinary meaning which can also be stated as the “reflector sheet that provides cover and relief for a shape of a protruding feature on the tile.”

42. The '812 Patent provides various examples where the reflector sheet provides cover and relief such as in Figs. 3 and 4 and the accompanying discussions.

VII. PETITIONER'S PRIOR ART SUMMARY

43. I understand that Petitioner has identified three primary references and various secondary references as prior art to the '812 Patent in its Grounds 1-3.

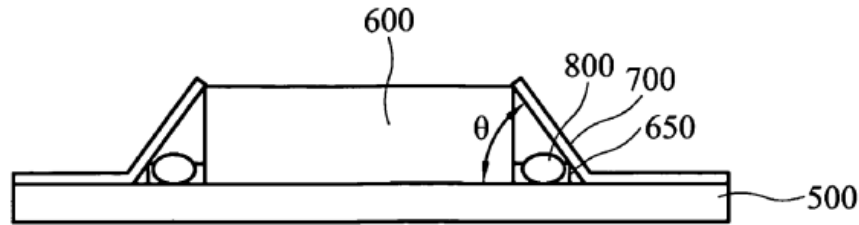
A. Chou

44. Petitioner's primary reference for Grounds 1-3 U.S. Patent No. 7,497,892 (Ex. 1005 - "Chou") was filed February 28, 2008, and issued on March 3, 2009. Chou describes a design for a light source assembly, emphasizing the use of LEDs and a reflector sheet to enhance lighting efficiency, particularly in the context of LCDs. The invention introduces variations in circuit board layouts, LED placements, and reflector sheet designs to achieve the desired results.

45. Chou is directed to a light source assembly that comprises a circuit board, a plurality of spot light sources, and a reflector sheet having holes corresponding to the spot light sources on the circuit board. Chou, Abstract.

46. Chou further discloses that "each first hole corresponds to one spot light source and the reflector sheet adjacent to each first hole forms an angle between about 0 degrees to about 90 degrees with the circuit board" Chou, 2:19-22. As shown in Fig. 2, "The hole 750 has at least one slit 760 extended from the periphery of the hole 750... In practice, the shape of the hole 750 depends on the light source used." Chou, 3:7-22. The reflector sheet 700 adjacent to the hole 750 forms an angle θ between about 0 degree to about 90 degree with circuit board 500. The angle θ will

change with the height of... LED600..., the length of lead 650 of... LED600..., and the amount of solder 800.” Chou, 3:42-49.



Chou FIG. 3A

47. While Chou discloses a reflector sheet 700 positioned to operate in conjunction with the LED 600 and LED leads 650, Chou does not disclose a reflector sheet that conforms to a protruding feature on the tile.

B. Starry

48. Petitioner’s secondary reference for Ground 2 is U.S. Patent Application Publication No. US 2006/0262310 (Ex. 1006 – “Starry”) was published on November 23, 2006.

49. Starry discloses a diffuse reflective article disposed in an optical cavity for lighting an LCD display. In detail, “The light guide 3 directs light towards the display panel 7... A diffuse reflector of the present invention is placed behind the light guide 3 and reflects light towards the liquid crystal display 7.” Starry at [0034]. The backlight uses a “cold cathode fluorescent lamp light source” or “a backlight liquid crystal optical display with a light emitting diode light source”, both

embodiments depict the light sources in an “optical cavity” Starry at [0039] “The present invention further includes an optical display, comprising: (I) a structure defining an optical cavity; (ii) a light source positioned within the optical cavity; (iii) a display panel through which light from the light source passes; and (iv) a diffuse reflector positioned within the optical cavity for reflecting light from the light source toward the display...” Starry at [0015]

50. An “optical cavity” is the major part of a laser as explained in https://en.wikipedia.org/wiki/Optical_cavity. “An optical cavity, resonating cavity or optical resonator is an arrangement of mirrors or other optical elements that forms a cavity resonator for light waves. Optical cavities are a major component of lasers, surrounding the gain medium and providing feedback of the laser light. They are also used in optical parametric oscillators and some interferometers. Light confined in the cavity reflects multiple times, producing modes with certain resonance frequencies. Modes can be decomposed into longitudinal modes that differ only in frequency and transverse modes that have different intensity patterns across the cross-section of the beam. Many types of optical cavity produce standing wave modes.”

C. Tabito

51. U.S. Patent Application Publication No. US 2007/0103908 (Ex. 1007 – “Tabito”) was published on May 10, 2007. Petitioner relies on Tabito as a secondary reference for Ground 3.

52. Tabito describes a light transmitting LCD apparatus. The device is formed by several rows of many light emitting units mounted on an interconnection substrate and a heat dissipating plate, as well as a reflecting section formed by a number of reflective sheet pieces and a reflective plate secured to reflective plate supports formed on the heat dissipating plate. Tabito at 1.

VIII. PETITIONER’S CHOU IN VIEW OF A POSITA FAILS TO RENDER OBVIOUS CLAIMS 1, 12, 15 AND 18.

53. Petitioner relies on Chou as its primary reference for Gound 1. But it is my opinion that a POSITA viewing Chou would not find claims 1, 12, 15, and 18 to be obvious for at least the claim elements discussed below in my declaration.

A. Chou Does Not Disclose “the reflector sheet configured to conform to a shape of a protruding feature on the tile” as Recited in Claim 1C and Claim 15C.

54. Petitioner is incorrect that the reflector sheet in Chou discloses or teaches “the reflector sheet configured to conform to a shape of a protruding feature on the tile” of claims 1 and 15 of the ’812 Patent. Chou instead discloses a reflector sheet 700 which changes with the “height of the spotlight source (LED 600), the

length of the lead 650 of the spotlight source (LED 600), and the amount of solder 800.”

55. First, the reflector sheet of Chou is not configured to conform to a shape of a *protruding feature*. Any modifications in the reflector sheet as disclosed in Chou are with respect to the solid state emitters. The '812 Patent does not include the solid state emitters within the definition of “protrusions.” The '812 patent describes protruding features over which the reflector may be configured to conform (“The substrates 13A, 13B can also include surface protrusions, such as, for example, a large wire interconnect (LWI)” '812 Patent, 4:62 – 64; “The LWI 18 is but one example of a surface protrusion that can occur on a surface of the tile substrate.” '812 Patent, 5:48-50. Importantly, the '812 Patent distinguishes a surface protrusion or protruding feature from a solid state emitter.

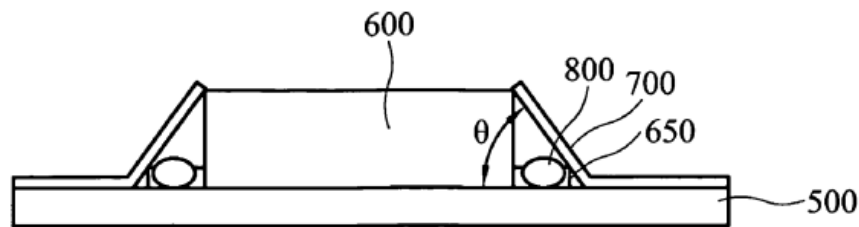
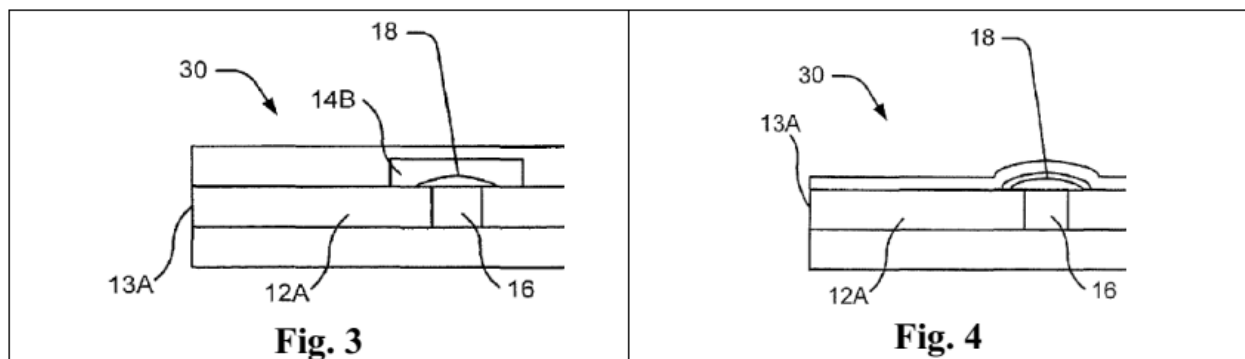


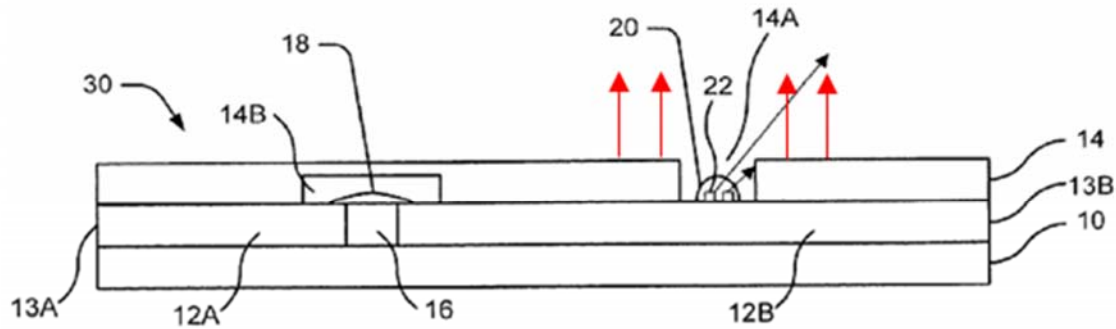
FIG. 3A

56. Second, Chou does not disclose a reflector configured to conform to the *shape* of a protruding feature, rather Chou only discloses a reflector configured to conform to the *height and width* of the solid state light emitter. As discussed above,

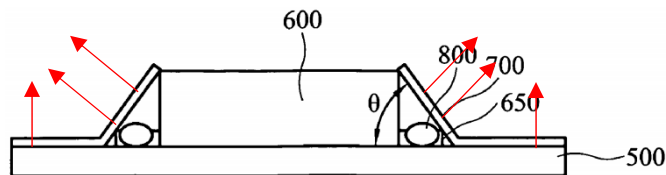
Petition relies on the argument that “the angle of the reflector sheet ‘will change with the height of the spotlight source (LED 600), the length of the lead 650 of the spotlight LED source (LED 600), and the amount of the solder 800).’” Petition at 17 *citing* Chou, 3:45-47. This is further clarified in FIG. 3 of Chou which shows that the reflector is arranged to meet the emitting surface of the LED by deflecting upward. This arrangement is counter to the teaching of the ’812 patent.



57. Furthermore, under Chou’s disclosure, it would contradict the reflector as described in the ’812 Patent embodiment. The ’812 patent describes a reflector that is normal to the emission surface of the LED. That is, the reflector conforms to protruding features but, in general, conforms to the plane of the substrate. This is intended to ensure that light reflected off of the reflector propagates in a direction perpendicular to the surface of the reflector.

**FIGURE 3**

58. By angling the reflector, the teachings of Chou would cause light to propagate at angles that are not optimal for backlighting an LCD display. This would cause the angled portions of the reflector in Chou as defined by the angle θ in Fig 3a to reflect light away from the LCD display.

**Chou FIG. 3A**

59. The invention of Chou was also intended for a different purpose than the '812 Patent. Chou's use of slits to "create relief areas for the reflector sheet relative to a protruding feature" does not serve the same purpose as the reflector sheet of the '812 Patent which is meant to overlay the substrate in a way so as to improve the reflective qualities of the substrate. Slits cut into the reflector would reduce the surface integrity of the reflector and thus reduce its reflective qualities.

60. The reflector of Chou is intended to cover features of the solid state emitters (e.g. hide from view the leads 650) so that only the light emitting surface of solid state emitter is visible from a planar view. The reflector of the '812 patent is intended to cover protrusions on the surface of the substrate without reducing the overall reflective quality of the reflector (by, for example, creating a recess in the reflector to accommodate the protrusions). Chou and the '812 Patent are separate and distinct inventions and do not overlap.

B. Chou Does Not Disclose a “wherein the reflector sheet comprises an aperture configured to be positioned proximate to the solid state lighting element, wherein the reflector sheet does not contact the solid state lighting element” as Recited in Claims 12 and 18.

61. Increasing the *angle* θ of Chou would result in the reflector sheet not making contact with the solid state lighting element. Increasing the *angle* θ would have the end of Chou's reflector sheet in contact with nothing - neither the solder nor the surface of the light emitter as well as change the reflective nature of the reflector. A reflector sheet in such a shape would also be able to move around. Leaving the end of the reflector sheet unrestrained would *increase* the risk of a short circuit if such a conductive reflector were employed. The likelihood that it would make contact with either the solder, the conductive traces disposed on the surface of the die or the Gallium Nitride semiconductor that makes up the surface of the die are increased in such an arrangement.

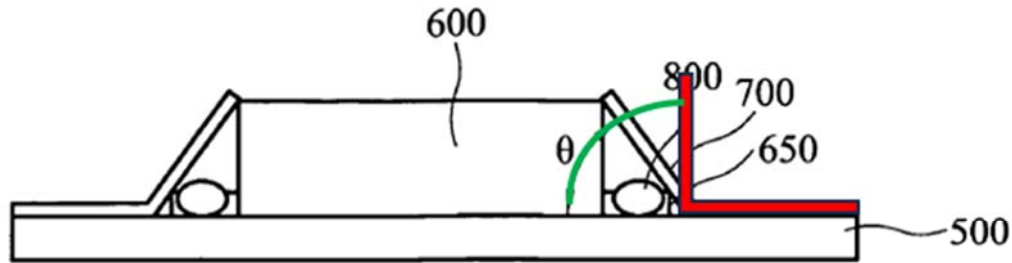


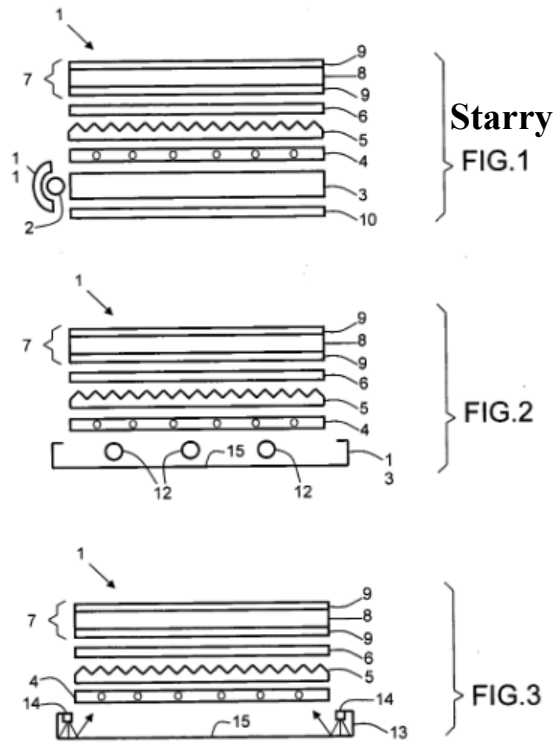
FIG. 3A

62. Displays in a vehicle such as a boat, airplane train or car typically use compact edge lighting systems. Direct backlighting systems are more commonly used in larger TVs and monitors. Most edge lit backlighting systems do not use a protective casing or lens on the LEDs.

IX. GROUND 2 - CHOU AND STARRY FAIL TO RENDER OBVIOUS DEPENDENT CLAIMS 2-6 AND 21

A. There is No Motivation to Combine Chou and Starry

63. Because Chou relates to a light source assembly comprising an LED or LEDs mounted on a circuit board and reflector sheet disposed on the circuit board and Starry relates to a diffuse reflective article disposed specifically in an optical cavity, one would not be motivated to combine Chou with Starry.



64. Figures 1-3 of Starry show the diffuse reflective article in use in a display, while the other figures are graphs showing various characteristics. In Figure 1, the diffuse reflector 10 is disposed under a waveguide employed to transmit light in an edge-lighting arrangement. As Starry employs the use of a wave guide, the teachings are that of an CCFL edge lighting arrangement, not akin to the bare LED arrangement of Chou or the '812 Patent. Chou teaches that the light emitting elements be arranged on the surface of the same substrate on which a reflector is arranged. In an edge lighting arrangement such as Starry Fig 1, the light emitting elements (a single CCFL 2) are not arranged (nor can they be) on the same substrate or PCB on which the diffusive reflector is arranged.

65. The light exits the waveguide either towards or away from the LCD panel 7; light exiting away from the LCD panel is reflected back into the waveguide by diffuse reflector 10. *See* Starry at [0033 – 0034] Figure 2 of Starry shows a back scattering arrangement for the purpose of illuminating an LCD panel. In this arrangement, light propagates 360 degrees from three CCFLs 12, light propagating towards the diffuse reflector 15 is reflected back towards the LCD panel. Starry at [0039] The arrangement in Figure 3 of Starry functions on largely the same principles as the arrangement in Figure 2 save that the arrangement in Figure 3 employs 2 LEDs 14 as light sources which are arranged so that all of the produced light is directed to reflect off of the diffuse reflector 15.

66. None of the figures of Starry nor its specification describe an arrangement wherein the light sources are arranged on the same substrate as the diffuse reflector 10. The arrangements in Starry are not compatible with the arrangement of Chou. In addition to the incompatibility with Starry's teachings of housing the light source and reflector in an “optical cavity,” Starry's invention primarily focuses on using CCFLs as light sources rather than back lit LEDs. One would not look to an edge-lighting or back scattering arrangement for a component for use in a back lighting arrangement.

67. Furthermore, based on the specification it does not appear that the diffuse reflector of Starry would achieve the illustrated desired results of Starry were

it applied to the surface of the circuit board of Chou. Additionally, it appears that the materials employed in Starry were specifically calibrated to optimize for the disclosed arrangements of FIGs 1-3. Implementing the diffuse reflector disclosed in Starry would also require cutting holes in the diffuse reflector which would change the reflectivity of the article and the luminance of the display.

B. Chou and Starry Fail to Teach or Disclose wherein the reflector sheet comprises a diffuse reflector.

68. As discussed above, because one would not be motivated to combine the teachings of Chou with Starry, there is no teaching to incorporate a diffuse reflector with the reflector sheet.

C. Chou and Starry Fail to Teach or Disclose wherein the reflector sheet comprises a polymer based porous material.

69. Starry teaches a “polymer preferably comprises polyolefin.” On the other hand, the '812 patent teaches that the “reflector sheet 14 may be microcellular polyethylene terephthalate (MCPET), which may have a typical thickness of approximately 1mm.” '812 Patent, 5:7 – 9. Non-woven film fibrils of polyolefin have the consistency of a surgical mask commonly worn during the COVID-19 pandemic whereas an MCPET sheet is more rigid.

70. A more rigid material is desirable since its reflective shape can be maintained. The pores of non-woven film fibrils of polyolefin are a result of the irregular overlap of the fibers and are not equivalent to the pores of an MCPET sheet

which consists of billions of micro-bubbles. The former under magnification looks like a sponge whereas the latter looks like a tangle of overlapping strings.

D. Chou and Starry Fail to Teach or Disclose wherein the reflector sheet comprises a thickness of less than approximately 1.0 millimeter.” wherein the reflector sheet comprises a thickness of less than approximately 0.5 millimeters.” herein the reflector sheet comprises a thickness of less than approximately 0.25 millimeters.

71. Furthermore, Starry discloses a reflector sheet of preferable thickness between 0.25 and 0.15mm probably a function of Starry's optical cavity design. Although the range of 0.15 to 0.25 is within the range of 0 to 1, it is exclusive of a significant portion of the latter range. This preferred embodiment of the reflector sheet envisioned in the '812 patent falls outside of the range described by Starry.

X. GROUND 7 - CHOU AND TABITO FAIL TO RENDER OBVIOUS DEPENDENT CLAIMS 7, 10-11, 14, 16-17, 19-20, AND 23.

A. Chou and Tabito Fail to Render Obvious Independent Claim 20

i. Tabito does not disclose forming a plurality of mounting posts in the substrate.

72. Tabito describes an ‘optical stud member 25,’ that is ‘mounted to the back panel 13.’ Tabito’s mounting of stud members *to the back panel* does not disclose or teach forming mounting posts *in the substrate* as claimed in 20D. Nothing in FIG. 2 or the description in Tabito suggested that the mounting posts are formed in the substrate. As seen in FIG. 2, the mounting posts are mounted to the back panel 13.

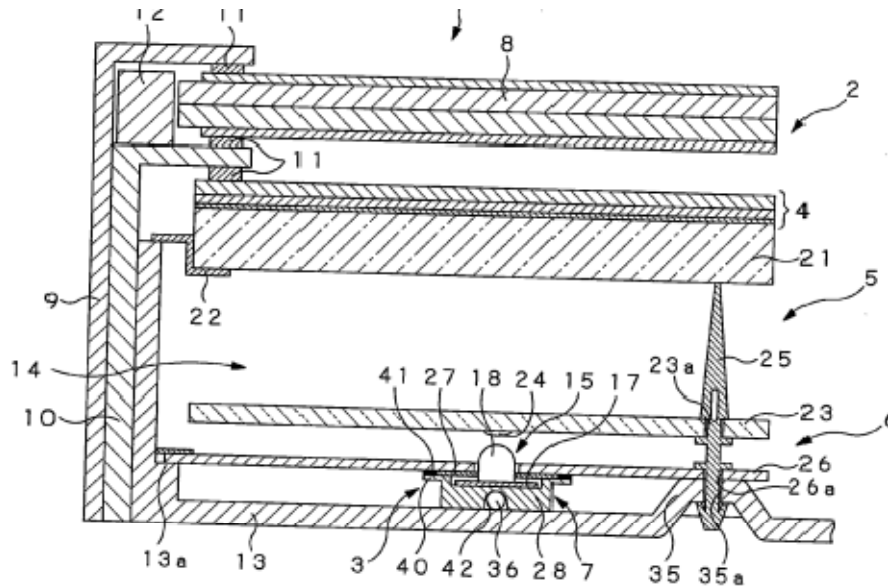


FIG. 2

B. Because Chou Does Not Render Obvious Independent Claims 1 and 15, the Chou and Tabito fail to render obvious Dependent Claims 7, 10-11, 14, 16-17, 19, and 23.

73. Because Ground 1 based on Chou in view of a POSITA fails to render obvious claims 1 and 15, the combination of Chou and Tabito does not teach or render obvious dependent claims 7, 10-11, 14, 16-17, 19, and 23.

74. Tabito is directed to providing backlighting for a larger sized LCD display. A backlight section sending out illuminating light is formed by a plural number of rows made up of many light emitting units arranged on the back Surface of a liquid crystal display panel. The Tabito references does not disclose any of the elements of independent claims 1 and 15 which are absent from Chou such that Chou in view of Tabito and further in view of a POSITA would render obvious independent claims 1 and 15.

Declaration of William K. Bohannon

IPR2023-01385

Ex. 2001

Patent No. 7,690,812

75. I declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true; and that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code.

Dated December 18, 2023,

By 
William K. Bohannon,