

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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LG DISPLAY CO., LTD and LG ELECTRONICS, INC.,  
Petitioner,

v.

INNOVATIVE DISPLAY TECHNOLOGIES LLC,  
Patent Owner.

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Case IPR2014-01362<sup>1</sup>  
Patent 7,384,177 B2

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Before THOMAS L. GIANNETTI, MIRIAM L. QUINN, and  
BEVERLY M. BUNTING, *Administrative Patent Judges*.

GIANNETTI, *Administrative Patent Judge*.

FINAL WRITTEN DECISION  
35 U.S.C. § 328(a) and 37 C.F.R. § 42.73

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<sup>1</sup> Case IPR2015-00489 has been joined with this proceeding.

LG Display Co., Ltd. filed a Petition seeking to institute an *inter partes* review of claims 1–3, 5–7, 9, 10, 13–15, 19, 21, and 23–27 of U.S. Patent No. 7,384,177 (“the ’177 patent”). Paper 2 (“Pet.”). Innovative Display Technologies LLC (“Patent Owner”) filed a Preliminary Response. Paper 8 (“Prelim. Resp.”). Applying the standard set forth in 35 U.S.C. § 314(a), the Board instituted an *inter partes* review of all challenged claims. Paper 12 (“Institution Decision”). Following institution, the proceeding was joined with IPR2015-00489, filed by LG Electronics, Inc., challenging the same claims of the ’177 patent on the same grounds as in this proceeding. For the purpose of this Decision, we will refer to LG Display Co., Ltd. and LG Electronics, Inc., jointly, as “Petitioner.”

During the trial, Patent Owner filed a Patent Owner Response (Paper 20, “PO Resp.”), and Petitioner filed a Reply to the Patent Owner Response (Paper 24, “Pet. Reply”). An oral hearing was held on November, 20, 2015, and a copy of the transcript has been made part of the record. Paper 31 (“Hearing Tr.”).

We have jurisdiction under 35 U.S.C. § 6(c). This Decision is a Final Written Decision under 35 U.S.C. § 318(a) as to the patentability of the claims on which we instituted trial. Based on the record before us, Petitioner has shown, by a preponderance of the evidence, that claims 1–3, 5–7, 9, 10, 13–15, 19, 21, 23–25, and 27 of the ’177 patent are unpatentable under 35 U.S.C. § 103(a) and claims 1, 2, 6, 7, 9, 10, 13–15, 19, 21, 23, 24, and 26 are unpatentable under 35 U.S.C. § 102(e).

## I. BACKGROUND

### A. *The '177 Patent (Ex. 1001)*

The '177 patent is titled "Light Emitting Panel Assemblies." The Abstract describes the subject matter as follows:

Light emitting assemblies include a tray that forms a cavity or recess containing one or more light sources. A sheet, film or substrate is positioned over the cavity or recess for controlling the light emitted from the assembly. The tray acts as a back, side or edge reflector, and has one or more secondary reflective or refractive surfaces.

Ex. 1001, Abstract.

### B. *Challenged Claims*

The '177 patent has two independent claims. They are reproduced here, with emphasis added to certain elements that will be discussed *infra*.

1. A light emitting assembly comprising *a tray having a back wall and continuous side walls that form a hollow cavity or recess completely surrounded by the side walls*, at least one light source located, mounted or positioned in the cavity or recess, and at least one sheet, film or substrate overlying the assembly *for controlling the light emitted from the assembly to fit a particular application*, wherein the tray acts as at least one of a back, side edge, and end edge reflector and has one or more secondary flat, angled, faceted or curved reflective or refractive surfaces to redirect at least a portion of the light emitted by the light source in a predetermined manner within the cavity or recess.

15. A light emitting assembly comprising *a tray having a back wall and continuous side walls that form a hollow cavity or recess completely surrounded by the side walls*, at least two light sources located, mounted or positioned in the cavity or recess, and at least one sheet, film or substrate overlying the assembly *for controlling the light emitted from the assembly to fit a particular application*, wherein the tray acts as at least one of a back, side edge and end edge reflector and has at least one

secondary flat, angled, faceted or curved reflective or refractive surface to facilitate better mixing of light rays within the cavity or recess to produce a desired light output color or uniformity.

*C. Related Proceedings*

Patent Owner states that it has asserted infringement of the '177 patent by Petitioner in the following proceeding: *Delaware Display Group LLC v. LG Electronics, Inc.*, No. 1:13-cv-02109 (D. Del., filed Dec. 31, 2013). Paper 5. Patent Owner identifies numerous other civil actions in which it has asserted infringement of the '177 patent by other defendants. See Paper 5 for a listing.

*D. Claim Construction*

The Board interprets claims of an unexpired patent using the broadest reasonable construction in light of the specification of the patent in which they appear. 37 C.F.R. § 42.100(b); *see also* Office Patent Trial Practice Guide, 77 Fed. Reg. 48,756, 48,766 (Aug. 14, 2012). The only claim term the Board construed in its Institution Decision is the term “deformities,” appearing in all challenged claims. We construed the term as “any change in the shape or geometry of the panel surface and/or coating or surface treatment that causes a portion of light to be emitted.” Paper 12, 4 (citing '177 patent, Ex. 1001, col. 4, ll. 44–48). Neither party has proposed any other constructions. In light of the foregoing, we see no reason to modify our previous construction of “deformities” or to construe any other terms.

*E. References*

Petitioner relies on the following two references from the Petition:<sup>2</sup>

Melby	US 5,054,885	Oct. 8, 1991	Ex. 1006
Nakamura et al.,	US 5,453,855	Dec. 9, 1993	Ex. 1007

Petitioner relies also on a Declaration of Michael J. Escuti, Ph.D. (“Escuti Decl.”). Ex. 1004. Likewise, Patent Owner’s Response (Paper 24) is accompanied by a Declaration of Mr. Kenneth Werner (Werner Decl.”). Ex. 2016. Deposition transcripts for those witnesses have been entered in the record as Exhibits 1026 (“Werner Dep.”) and 2015 (“Escuti Dep.”).

*F. Grounds Asserted*

We instituted trial on the following grounds:

References	Basis	Claims Challenged
Melby	§ 103(a)	1–3, 5–7, 9, 10, 13–15, 19, 21, 23–25, and 27
Nakamura	§ 102(e)	1, 2, 6, 7, 9, 10, 13–15, 19, 21, 23, 24, and 26

II. ANALYSIS

*A. Overview — Obviousness*

Under 35 U.S.C. § 103(a), an invention is not patentable if the differences between the claimed subject matter and the prior art are such that the subject matter, as a whole, would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. *KSR Int’l Co. v. Teleflex Inc.*, 550 U.S. 398, 406 (2007). The question of obviousness is resolved on the basis of underlying

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<sup>2</sup> The references are ordered by exhibit number with effective dates asserted by Petitioner.

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