

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

LG ELECTRONICS, INC. and LG ELECTRONICS U.S.A., INC.,
Petitioner,

v.

TOSHIBA SAMSUNG STORAGE TECHNOLOGY KOREA
CORPORATION,
Patent Owner.

Case IPR2016-01677
Patent RE43,106 E

Before KALYAN K. DESHPANDE, MICHAEL R. ZECHER, and
TREVOR M. JEFFERSON, *Administrative Patent Judges*.

DESHPANDE, *Administrative Patent Judge*.

DECISION

Institution of *Inter Partes* Review
35 U.S.C. § 314(a) and 37 C.F.R. § 42.108(a)

I. INTRODUCTION

LG Electronics, Inc. and LG Electronics U.S.A., Inc. (collectively, “Petitioner”) filed a Petition requesting an *inter partes* review of claims 4–6, 20–27, 36, and 37 of U.S. Patent No. RE43,106 E (Ex. 1001, “the ’106 patent”). Paper 1 (“Pet.”). Toshiba Samsung Storage Technology Korea Corporation (“Patent Owner”) did not file a Preliminary Response. We have jurisdiction under 35 U.S.C. § 314(a), which provides that an *inter partes* review may not be instituted “unless . . . there is a reasonable likelihood that the petitioner would prevail with respect to at least 1 of the claims challenged in the petition.” After considering the Petition and associated evidence, we conclude that Petitioner has demonstrated a reasonable likelihood that it would prevail in showing the unpatentability of claims 4–6, 20–27, 36, and 37 of the ’106 patent. Thus, we authorize institution of an *inter partes* review of claims 4–6, 20–27, 36, and 37 of the ’106 patent.

A. Related Proceedings

The parties indicate that the ’106 patent is involved in the following district court cases: (1) *LG Electronics, Inc. v. Toshiba Samsung Storage Technology Korea Corp.*, Case No. 1:12-cv-01063 (LPS) (D. Del.); and (2) *Toshiba Samsung Storage Technology Korea Corp. v. LG Electronics, Inc.*, Case No. 1:15-cv-0691 (LPS) (D. Del.). Pet. 2–3; Paper 9, 1. Case IPR2015-01653 involved the ’106 patent and a Final Decision was issued on February 2, 2017. *LG Elec. v. Toshiba Samsung Storage Tech. Korea Corp.*, Case IPR2015-01653, Paper 43 (PTAB Feb. 2, 2017).

B. The ’106 Patent (Ex. 1001)

The ’106 patent describes an optical pickup apparatus that can compatibly record information on, and read information from, a digital video

Holographic lens 35 selectively diffracts the incident light beam in order to prevent the generation of spherical aberration with regard to the light beam's focus on the information recording surfaces of optical disks 37 and 41. *Id.* at 5:6–10. The relationship between holographic lens 35, objective lens 36, and optical disks 37 and 41 is illustrated in Figure 4A of the '106 patent as follows:

FIG. 4A

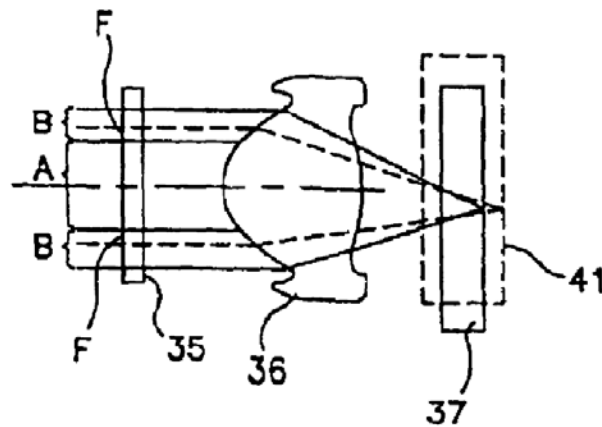


Figure 4A describes that objective lens 36 is partitioned into regions A and B. *Id.* at 5:13–14. Region A is closer to the optical axis of objective lens 36 and has little effect on spherical aberration, whereas region B is farther from the optical axis of objective lens 36 and has a large effect on spherical aberration. *Id.* at 5:14–18. Objective lens 36 is most appropriate for an optical disk having a thin thickness, such as a DVD. *Id.* at 5:18–20. The light beam incident to region A passes through objective lens 36 without any diffraction by holographic ring lens 35 and is focused directly on the disk. *Id.* at 5:33–36. The light beam incident to region F is wavelength-selectively diffracted by holographic ring lens 35 and then proceeds to objective lens 36. *Id.* at 5:36–39.

C. Illustrative Claim

Petitioner challenges claims 4–6, 20–27, 36, and 37 of the '106 patent. Pet. 15–69. Claims 4, 20, 36, and 37 are the only independent claims at issue. Claim 4 is illustrative of the challenged claims and is reproduced below:

4. An objective lens for an optical pickup, the objective lens comprising:
 - a holographic region having a plurality of concentric ring-shaped steps formed on a lens surface of the objective lens,
 - wherein the objective lens has a wavelength dependence such that two light beams having corresponding different wavelengths and an identical diffractive order form appropriate different wavefronts corresponding to reproducing and/or recording information from and/or to corresponding two kinds of optical recording media having respectively different thickness.

Ex. 1001, 7:63–8:7.

D. The Alleged Ground of Unpatentability

The information presented in the Petition sets forth a proposed ground of unpatentability of claims 4–6, 20–27, 36, and 37 of the '106 patent under 35 U.S.C. § 103(a) as follows (*see* Pet. 25–69):¹

¹ Petitioner supports its challenge with the Declaration of Dr. Mansuripur. Ex. 1012.

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