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BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte PAUL O. SCHEIBE

Appeal 2016-000112
Application 11/836,104[1]
Technology Center 2600

Before ST. JOHN COURTENAY III, JAMES W. DEJMEK, and JOHN D. HAMANN, *Administrative Patent Judges*.

HAMANN, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant files this appeal under 35 U.S.C. § 134(a) from the Examiner's Final Rejection of claims 1–9. We have jurisdiction under 35 U.S.C. § 6(b). We reverse.

THE CLAIMED INVENTION

Appellant's claimed invention "relates to light-emitting diode (LED) based signboards." Spec. 1, ll. 30–32. Claim 1 is illustrative of the subject matter of the appeal and is reproduced below.

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[1] According to Appellant, the real party in interest is Landmark Screens LLC. App. Br. 1.

1. A method for compensating for a chromaticity shift due to ambient light in an electronic signboard, the signboard having light emitting elements of four or more colors, the method comprising:

measuring the ambient light reflected from the signboard; and for each pixel on the signboard,

(a) finding a solution to colorimetric equations that relate in a psychovisual color space a desired light to be perceived as being displayed by the pixel to an additive color mixture of the ambient light and the light to be actually displayed by the pixel in the absence of ambient light, as expressed by intensities of the four or more colors of the light emitting elements, wherein, when the light to be actually displayed according to an exact solution of the calorimetric equations is physically realizable, the exact solution of the calorimetric equations is selected as the solution and wherein, when the light to be actually displayed according to the exact solution is not physically realizable, an approximate solution of the calorimetric equations is selected as the solution among physically realizable solutions, the approximate solution being selected according to a criterion that is based on a difference between the desired light and the additive color mixtures of the physically realizable solutions; and

(b) controlling the light actually displayed by the pixel in accordance with the solution found.

REJECTIONS ON APPEAL

(1) The Examiner rejected claims 1–3 and 6 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Kanai (US 2003/0234794 A1; published Dec. 25, 2003) and Tsukada (US 2007/0110304 A1; published May 17, 2007).

(2) The Examiner rejected claims 4 and 5 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Kanai, Tsukada, and Boldt,

Jr. et al. (US 2006/0227085 A1; published Oct. 12, 2006) (hereinafter "Boldt").

(3) The Examiner rejected claims 7–9 under 35 U.S.C. § 103(a) as being unpatentable over the combination of Kanai, Tsukada, and Glassner et al. (US 5,384,901; issued Jan. 24, 1995).

DISPOSITIVE ISSUE ON APPEAL

The dispositive issue for this appeal is whether the Examiner errs in finding the cited portions of the combination of Kanai and Tsukada, and Kanai in particular, teach or suggest "finding a solution to colorimetric equations that relate in a psychovisual color space a desired light to be perceived as being displayed by the pixel to an additive color mixture of the ambient light and the light to be actually displayed by the pixel in the absence of ambient light," as recited in claim 1.

ANALYSIS

We find Appellant's arguments persuasive with respect to the cited portions of the combination, and Kanai in particular, failing to teach or suggest the above dispositive, disputed limitation.

Appellant argues rather than teaching the claimed colorimetric equations that relate a desired light to be perceived to an additive color mixture of the ambient light and the light to be displayed by the pixels without ambient light, Kanai instead teaches equations applying corrections to pixel values corresponding to reference output values of a projector projecting light in a dark room (i.e., without ambient light). App. Br. 4 (citing Kanai ¶ 61). Appellant contends, however, that none of Kanai's

corrections addresses the claimed equations relating to the additive mixture of ambient light and displayed light without ambient light. *See* App. Br. 4–5 (citing Kanai ¶¶ 66, 88–95, 100–104, 110–112, 114–116, 119–123, Fig. 7); Reply Br. 5–6. Rather, Appellant argues Kanai's teachings of adjusting the output characteristics of the projector in application to account for the color of illumination involves only adjusting the color offsets from the reference values based on a difference between the color of the illumination and white and/or black of the projector. *See* App. Br. 5 (citing Kanai ¶¶ 88–95, 102–104; Fig. 7); Reply Br. 7–8 (citing Kanai ¶ 87).

In response, the Examiner finds the combination, and Kanai in particular, teaches or suggests the disputed limitation. *See* Ans. 12–13 (citing Kanai ¶¶ 66, 85–97). For example, the Examiner finds Kanai teaches or suggests correcting for, *inter alia*, the color of illumination, which would include ambient light — thus, teaching the disputed limitation. Ans. 13 (citing Kanai ¶ 85); *see id.* (citing Kanai ¶¶ 86–97) (finding Kanai teaches correction amounts for the color of illumination in the application circumstances). The Examiner further finds the correction parameters for the color of the illumination are obtained by calibrations based on the color white and the color black from the projector. Ans. 16 (citing Kanai ¶¶ 102–104, 88, 90–92, 95).

We are persuaded by Appellant's pertinent arguments. We agree with Appellant that the portions of Kanai cited by the Examiner do not teach or suggest the claimed colorimetric equations, which include portions concerning ambient light. Rather, Kanai's teachings of correcting for the color of illumination relate to specific output characteristics of the projector in application. *See* Kanai ¶¶ 85–86, 87 (teaching a difference between the

color of the illumination and white of the projector is obtained for offsets), ¶ 88 (teaching the color of the illumination corresponds to a measured value of the black of the projector). Such teachings are insufficient to teach or suggest the claimed additive color mixture, which directly includes the ambient light.

Accordingly, we do not sustain the Examiner's rejection of claims 1–3 and 6, as well as the rejections of the remaining claims, which each depend directly or indirectly from claim 1.

DECISION

We reverse the Examiner's decision rejecting claims 1–9.

REVERSED