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Table with 5 columns: APPLICATION NO., FILING DATE, FIRST NAMED INVENTOR, ATTORNEY DOCKET NO., CONFIRMATION NO. Includes details for application 14/601,713, inventor Koji YONEMURA, attorney Stuebaker & Brackett PC, examiner HSU, KENDRICK, art unit 2871, and notification date 11/21/2018.

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UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE PATENT TRIAL AND APPEAL BOARD

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*Ex parte* KOJI YONEMURA

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Appeal 2018–003320  
Application 14/601,713  
Technology Center 2800

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Before: ADRIENE LEPIANE HANLON, LINDA M. GAUDETTE, and  
JEFFREY B. ROBERTSON, *Administrative Patent Judges*.

ROBERTSON, *Administrative Patent Judge*.

DECISION ON APPEAL<sup>1</sup>

STATEMENT OF THE CASE

Appellant<sup>2</sup> appeals under 35 U.S.C. § 134(a) from the Examiner’s  
Final Rejection of claims 1–6 and 10. (Appeal Br. 2–3.) We have  
jurisdiction pursuant to 35 U.S.C. § 6(b).

We AFFIRM.

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<sup>1</sup> This Decision includes citations to the following documents:  
Specification filed January 21, 2015 (“Spec.”); Final Office Action dated  
June 22, 2017 (“Final Act.”); Appeal Brief filed November 8, 2017 (“Appeal  
Br.”); Examiner’s Answer dated December 28, 2017 (“Ans.”); and Reply  
Brief filed February 6, 2018 (“Reply Br.”).

<sup>2</sup> Appellant/Applicant is Mitsubishi Electric Corporation, which is identified  
as the real party in interest. (Appeal Br. 2.)

## THE INVENTION

Appellant states that the invention relates to a liquid crystal display apparatus (Spec. 1, l. 6.)

Claim 1, the only independent claim on appeal, is reproduced below from the Claims Appendix, and recites:

1. A liquid crystal display apparatus that controls liquid crystals with a pixel structure having a red pixel, a green pixel, a blue pixel, and a white pixel as a basic unit,

wherein voltage-transmittance characteristics of said liquid crystals corresponding to said white pixel are different from voltage-transmittance characteristics of said liquid crystals corresponding to each of said red pixel, said green pixel, and said blue pixel, and

a chromaticity of a white display formed by said white pixel approximately equals a chromaticity of a white display formed by said red pixel, said blue pixel, and said green pixel in said voltage-transmittance characteristics of said liquid crystals corresponding to said white pixel.

(Appeal Br. 6, Claim Appendix.)

## REJECTION

The Examiner rejected claims 1–6 and 10 under 35 U.S.C. § 103 as obvious over Ono (US 7,554,640 B2, issued on June 30, 2009, “Ono”) and Kouno et al. (US 2009/0102769 A1, published on April 23, 2009, “Kouno”). (Final Act. 3–6.)

Appellant presents arguments for claim 1 on appeal. (Appeal Br. 3.) Accordingly, we select claim 1 as representative, and decide the appeal on claim 1 alone. 37 C.F.R. § 41.37(c)(1)(iv).

## ISSUE

The Examiner found that Ono discloses a liquid crystal display apparatus that controls liquid crystals with a pixel structure having a red pixel, a green pixel, a blue pixel, and a white pixel, where the pixel electrode corresponding to the white pixel has a different orientation and as a result has a different voltage-transmittance characteristic from the voltage characteristics of the red pixel, green pixel, and blue pixel. (Final Act. 3.) The Examiner found that Ono does not disclose a chromaticity of a white display formed by a white pixel approximately equal with a chromaticity of a white display formed by the red pixel, blue pixel, and green pixel. (*Id.*)

The Examiner found that Kouno discloses that it is not ideal to have the chromaticities unequal. (*Id.* at 4 (citing Kouno ¶¶ 18, 70).) The Examiner determined that it would have been obvious to have the chromaticity of a white display formed by the white pixel approximately equal with a white display formed by the red pixel, blue pixel, and green pixel in Ono in order to produce uniform pixel coloring and optimize chromaticity.

Appellant argues that Kouno does not disclose or suggest any matching coinciding or approximately equaling of chromaticity values between a white pixel and a combination of red, blue, and green pixels, because Kouno presumes that the chromaticities are equal, which either does not provide a benefit to matching the chromaticities, or teaches there is no need for chromaticity equalization. (*Id.*)

The dispositive issue is:

Has Appellant identified reversible error in the Examiner’s determination that it would have been obvious to have the chromaticity of a white display formed by a white pixel approximately equal a chromaticity of a white display formed by a red pixel, a blue pixel, and a green pixel in Ono in view of the disclosure of Kouno?

#### DISCUSSION

We are not persuaded by Appellant’s arguments regarding the disclosure of Kouno as understood by one of ordinary skill in the art. That is, Kouno provides evidence that one of ordinary skill would have considered it to be desirable to have the chromaticity of the white produced by the red, green, and blue pixels to be approximately equal to the white produced by the white pixel. Specifically, Kouno, in paragraph 18, discloses

there is a difference between chromaticity coordinates [] of white produced by three subpixels of R, G, and B and chromaticity coordinates [] of white produced by the white subpixel, thus resulting in the appearance of an inflection point at each line of demarcation among colors in a chromaticity diagram in the RGBW four color colorimetric system.

Kouno discloses that because of the inflection point, “a singular point (for example, gamma characteristic abnormality or a like) appears on a display screen. (*Id.*) Also, in paragraph 70, Kouno discloses “even when there is a difference in both white coordinates, though such a state is not ideal.”

Thus, although we do not disagree with Appellant that Kouno itself does not appear to disclose any matching of chromaticity values between the white and a combination of red, blue, and green pixels, we disagree with

Appellant that because of this, Kouno renders moot any motivation for chromaticity equalization. (Appeal Br. 4.) Rather, in view of the disclosures of Kouno discussed above, we agree with the Examiner that one of ordinary skill in the art would have had a reason to equalize the chromaticities, namely that the difference between those chromaticities are not ideal, and result in the appearance of an undesirable inflection point. (Ans. 4.) Indeed, a reference stands for all of its specific teachings, as well as the inferences one of ordinary skill in this art would have reasonably been expected to draw therefrom. *In re Fritch*, 972 F.2d 1260, 1264–65 (Fed. Cir. 1992).

Accordingly, we affirm the Examiner’s rejection of claim 1, as well as the Examiner’s rejection of claims 2–6 and 10, which depend from claim 1.

#### DECISION

We affirm the Examiner’s decision rejecting claims 1–6 and 10.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 41.50(f).

#### AFFIRMED