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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE PATENT TRIAL AND APPEAL BOARD

Ex parte PETER MOROVIC, JAN MOROVIC,
JUAN MANUEL GARCIA REYERO VINAS, and
DAVID GASTON LIADO

Appeal 2019-001331
Application 15/305,271
Technology Center 2600

Before JOHN A. EVANS, JAMES W. DEJMEK, and
STEPHEN E. BELISLE, *Administrative Patent Judges*.

BELISLE, *Administrative Patent Judge*.

DECISION ON APPEAL

Appellant¹ appeals under 35 U.S.C. § 134(a) from a Final Rejection of claims 1–7 and 9–19. Appeal Br. 1. We have jurisdiction under 35 U.S.C. § 6(b).

We AFFIRM.

¹ Throughout this Decision, we use the word “Appellant” to refer to “applicant” as defined in 37 C.F.R. § 1.42 (2017). Appellant identifies the real party in interest as Hewlett-Packard Development Company, LP. Appeal Br. 1.

STATEMENT OF THE CASE

The Claimed Invention

Appellant's invention relates generally to "color mapping in an imaging system" (Spec. ¶ 12), based on "obtaining a measurement of one or more characteristics" of the imaging system (*id.*, Abstract).

Claim 1, reproduced below, is illustrative of the subject matter on appeal:

1. A method for generating a color mapping comprising:
 - selecting a resource within an imaging system, the resource being degraded;
 - modeling a limitation for the degraded resource;
 - determining a color mapping that incorporates the limitation, the color mapping being different than a color mapping in which the resource is not degraded,wherein the color mapping enables a mapping of color values from a first color space to Neugebauer Primary area coverage values, and compensates for the degraded resource within the imaging system.

Appeal Br. 9 (Claims App.).

The Applied References

The Examiner relies on the following references as evidence of unpatentability of the claims on appeal:

Encrenaz	US 2007/0273917 A1	Nov. 29, 2007
Lee	US 7,724,397 B2	May 25, 2010
Yamamoto	US 2012/0075372 A1	Mar. 29, 2012
Morovic	WO 2014/173474 A1	Oct. 30, 2014

The Examiner's Rejection

The Examiner made the following rejections of the claims on appeal:
Claims 1–3, 5–7, 10, and 15 stand rejected under 35 U.S.C. § 103 as being unpatentable over the combination of Lee and Morovic. Final Act. 2–4.

Claim 4, 9, and 11–14 stand rejected under 35 U.S.C. § 103 as being unpatentable over the combination of Lee, Morovic, and Yamamoto. Final Act. 4–7.

Claims 16–19 stand rejected under 35 U.S.C. § 103 as being unpatentable over the combination of Lee, Morovic, and Encrenaz. Final Act. 7–9.

ANALYSIS²

Appellant disputes the Examiner's findings that the applied combinations of Lee, Morovic, Yamamoto, and Encrenaz render obvious claims 1–7 and 9–19. Appeal Br. 3–7; Reply Br. 1–3. Appellant argues the appealed claims as a group. *See* Appeal Br. 4 (“Claim 1 is discussed herein in detail, but claims 6 and 15 are patentable for at least similar reasons.”); *id.* at 7 (arguing dependent claims 4, 9, 11–14, and 16–19 together with independent claims). Thus, for purposes of our analysis, we select independent claim 1 as the representative claim, and any claim not argued separately will stand or fall with our analysis of the rejection of claim 1. *See* 37 C.F.R. § 41.37(c)(1)(iv).

² Throughout this Decision, we have considered Appellant's Appeal Brief filed May 10, 2018 (“Appeal Br.”); Appellant's Reply Brief filed November 5, 2018 (“Reply Br.”); the Examiner's Answer mailed September 4, 2018 (“Ans.”); the Final Office Action mailed December 13, 2017 (“Final Act.”); and Appellant's Specification filed October 19, 2016 (“Spec.”).

Appellant submits two main arguments for patentability of independent claim 1, both of which we find unpersuasive of Examiner error, as discussed below.

First, Appellant argues “the applied art does not select a *resource* within an imaging system, where this *resource* is degraded.” Appeal Br. 4; *see id.* at 5 (“[I]n the applied art, there is no *resource* that is degraded.”); Reply Br. 1 (“[T]here is no degraded resource within the applied art that is selected.” (emphases omitted)). According to Appellant’s Specification, “[a]n imaging system . . . has one or more resources,” such as “a *printing device*” and “a display device,” and the printing device resource, for example, “may *comprise* printer pens, inks and/or nozzles.” Spec. ¶ 16 (emphases added); *see id.*, Fig. 1 (printing device 130; display 150). So the issue posed by Appellant’s argument here is whether Lee (or the combination of Lee and Morovic) teaches selecting a printing device, for example, that is degraded in some manner.

Lee discloses “[a] method for compensating for induced artifacts on *an image to be printed*,” and explains that “induced artifacts *can result from* a variety of sources, including ink dot placement errors, line feed errors, and *nozzle malfunctions*, . . . as well as *other mechanical issues* [within the printer].” Lee, col. 1:7–67 (emphases added); *see* Reply Br. 1 (“[N]ozzles can degrade when they are ‘malfunctioning.’”). Lee also discloses “image data regarding a specific image to be printed is *provided to an inkjet printer* . . . via a print command from a computer or central processing unit (“CPU”) electrically coupled to the printer.” Lee, col. 2:57–61 (emphasis added); *see id.*, col. 10:12–24 (claiming, e.g., a “method of a printer compensating for induced artifacts on an image to be printed;” “processing the image to be printed;” and “printing the image”). Contrary to Appellant, we find Lee,

including the foregoing disclosures, teaches selecting a printing device that is degraded in some manner. For example, Lee teaches selecting an inkjet printer to print images, where the inkjet printer has nozzle malfunctions or other mechanical issues (i.e., the selected resource is degraded). Indeed, Appellant admits that induced artifacts appearing in a printed image as disclosed in Lee are defects caused by a printer error, where “[t]he error may have occurred because a resource [i.e., the selected printer] has degraded.” Reply Br. 2. Based on the foregoing, we find Appellant does not show persuasively that the Examiner erred in finding Lee teaches selecting a resource within an imaging system, where the resource is degraded, as recited, for example, in independent claim 1.

Second, Appellant argues “the applied art does not determine a *color mapping* that incorporates a modeled limitation for the degraded resource, where this color mapping is different than a color mapping in which the resource is not degraded, and where this color mapping compensates for the degraded resource within the imaging system.” Appeal Br. 6. Appellant further argues “[t]he applied art multiplies ink values at each pixel location by a correction factor, so that a mechanically induced artifact is less visible when an identified ‘trouble’ region of an image is printed,” and “[t]he ‘correction factor’ just changes the amount of ink that is output, and does not map one color to another.” *Id.* The Examiner responds:

Lee discloses determining a color mapping (e.g., at block 206 (identify the color to be provided at each pixel location), and at block 208 (determine the correction factor), figure 5. Note: when [Lee] identif[ies] the color to be provided at each location, it must compare or map between a color not degraded and color degraded to determine the correction factor. Therefore at blocks 206 and 208, it must have a comparing or mapping colors, and thus it reads on determining a color mapping limitation of

claim 1) that incorporates the limitation, the color mapping being different than a color mapping in which the resource is not degraded (e.g., block 210 (identify an additional amount of ink to be provided at each pixel location) and block 212 (generate an image profile), fig. 5. Note: Thus at steps 210 and 212, [Lee] identif[ies] an additional amount of ink to be provided at each pixel location and generate[s] an image profile, which is [sic] incorporates the limitation, the color mapping being different than a color mapping in which the resource is not degraded, which is generating an image profile (block 212) being different than a color mapping (image profile) in which the resource is not degraded).

Ans. 3–4 (emphases omitted); *see also* Lee, col. 9:14–67 (discussing compensating for a degraded inkjet printer by modifying image data, e.g., red, green, blue image data regarding a specific image to be printed, to reduce the effect of a color artifact). We agree with, and adopt as our own, these findings of the Examiner in the Answer, to which Appellant does not meaningfully respond (*see* Reply Br. 1–3; Appeal Br. 6–7). Based on the foregoing, we find Appellant does not show persuasively that the Examiner erred in finding Lee (or the combination of Lee and Morovic) teaches the color mapping limitations at issue (*see supra*).

Accordingly, we sustain the Examiner’s rejection under 35 U.S.C. § 103 of independent claim 1. For similar reasons, we sustain the Examiner’s rejection under 35 U.S.C. § 103 of independent claims 6 and 15, and claims 2–5, 7, 9–14, and 16–19 which depend therefrom, none of which were argued separately. *See* 37 C.F.R. § 41.37(c)(1)(iv).

DECISION SUMMARY

In summary:

Claims Rejected	35 U.S.C. §	Reference(s)/ Basis	Affirmed	Reversed
1-3, 5-7, 10, 15	103	Lee, Morovic	1-3, 5-7, 10, 15	
4, 9, 11-14	103	Lee, Morovic, Yamamoto	4, 9, 11-14	
16-19	103	Lee, Morovic, Encrenaz	16-19	
Overall Outcome			1-7, 9-19	

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv).

See 37 C.F.R. § 41.50(f).

AFFIRMED