

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.

Paper No. 17

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte CORNELIS G. M. VAN ASMA

Appeal No. 1999-2450
Application No. 08/812,222

ON BRIEF

Before THOMAS, KRASS, and BARRY, Administrative Patent Judges.
BARRY, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal under 35 U.S.C. § 134 from an examiner's rejection of claims 1-4. We affirm-in-part.

BACKGROUND

The invention at issue in this appeal relates to plasma-addressed liquid crystal ("PALC") displays. A conventional PALC display comprises a layer of liquid electro-optical material such as liquid crystal ("LC"), data electrodes extending in a row direction, and plasma channels extending in

a column direction. Color filters representing red, green, and blue are aligned with corresponding data electrodes. Each intersection of one plasma channel with three data electrodes (i.e., a first for red, a second for green, and a third for blue) defines a group of LC-picture elements ("LC-pixels"). Accordingly, groups of three adjacent LC-pixels are obtained of which each pixel is associated with another of the primary colors.

In contrast, a group of LC-pixels in the appellant's PALC display is formed by one data electrode extending in the column direction and three plasma channels extending in the row direction. (The different color filters are aligned with corresponding plasma channels of the group so that the filters extend in the row direction rather than the column direction.) Accordingly, the number of data electrodes (in the row direction), the number of connections thereto, and the number of drivers coupled to these connections are reduced from those of the conventional PALC display by a factor of three. Although the number of plasma channels (in the column direction) is increased from those of the conventional

PALC display by a factor of three, the total number of connections is decreased because the number of rows is lower than the number of groups of pixels.

Claim 1, which is representative for present purposes, follows:

1. A plasma-addressed colour display device comprising:

a layer of electro-optical material (42) sandwiched between elongated data electrodes (18) and plasma channels (20) to obtain a matrix structure of pixelelements (16), and

colour filters being associated with the pixelelements (16) for obtaining groups (G) of adjacent pixelelements (16) representing different colours enabling display of a colour picture, characterized in that the display device is adapted to comprise groups (G) of pixelelements (16) each being constituted with a common data electrode (18) cooperating with a group of plasma channels (20), the colour filters being aligned with the plasma channels (20).

The prior art applied by the examiner in rejecting the claims follows:

Buzak et al. (Buzak)
1990

4,896,149

Jan. 23,

Tanamachi 4, 1996	5,523,770	June
	(filed Mar. 27, 1995)	
Kitajima et al. (Kitajima) 1992.	5,091,722	Feb. 25,

Claims 1-4 stand rejected under 35 U.S.C. § 103(a) ["§ 103(a)"] as being obvious over Tanamachi and as being obvious over Buzak in view of Kitajima. Rather than reiterate the arguments of the appellant or examiner in toto, we refer the reader to the briefs and answer for the respective details thereof.

OPINION

After considering the record, we are persuaded that the examiner erred in rejecting claims 1-4 as being obvious over Tanamachi and in rejecting claims 2 and 4 as being obvious over Buzak in view of Kitajima. We are not persuaded, however, that he erred in rejecting claims 1 and 3 as being obvious over Buzak in view of Kitajima. Accordingly, we affirm-in-part. We begin by noting that the references

represent the level of ordinary skill in the art. See In re GPAC Inc., 57 F.3d 1573, 1579, 35 USPQ2d 1116, 1121 (Fed. Cir. 1995)(finding that the Board of Patent Appeals and Interference did not err in concluding that the level of ordinary skill was best determined by the references of record); In re Oelrich, 579 F.2d 86, 91, 198 USPQ 210, 214 (CCPA 1978) ("[T]he PTO usually must evaluate ... the level of ordinary skill solely on the cold words of the literature."). Of course, "[e]very patent application and reference relies to some extent upon knowledge of persons skilled in the art to complement that [which is] disclosed'" In re Bode, 550 F.2d 656, 660, 193 USPQ 12, 16 (CCPA 1977) (quoting In re Wiggins, 488 F.2d 538, 543, 179 USPQ 421, 424 (CCPA 1973)). Those persons "must be presumed to know something" about the art "apart from what the references disclose." In re Jacoby, 309 F.2d 513, 516, 135 USPQ 317, 319 (CCPA 1962). With these principles in mind, we consider the following rejections:

- Rejection over Tanamachi
- Rejection over Buzak in view of Kitajima.

We begin with the former rejection.

I. Rejection over Tanamachi

The examiner asserts, "Tanamachi teaches a plasma display device comprising color filters for providing color display picture(see ... column 7, lines 26-28). It would have been obvious to have modified Tanamachi's prior art with the teaching of Tanamachi, so as to provide a color display."

(Examiner's Answer at 3.) The appellant argues, "there is no teaching or suggestion in the reference that a group of pixel elements representing different colors is associated with a common data electrode" (Appeal Br. at 7.) The examiner responds, "such limitation can not [sic] be found anywhere in claims 1-4." (Examiner's Answer at 4.)

"`[T]he main purpose of the examination, to which every application is subjected, is to try to make sure that what each claim defines is patentable. [T]he name of the game is the claim'" In re Hiniker Co., 150 F.3d 1362, 1369, 47 USPQ2d 1523, 1529 (Fed. Cir. 1998)(quoting Giles S. Rich, The Extent of the Protection and Interpretation of Claims--American Perspectives, 21 Int'l Rev. Indus. Prop. & Copyright L. 497, 499, 501 (1990)). Here, claims 1-4 specify

in pertinent part the following limitations: "color filters being associated with the pixelelements (16) for obtaining groups (G) of adjacent pixelelements (16) representing different colors enabling display of a color picture, characterized in that the display device is adapted to comprise groups (G) of pixelelements (16) each being constituted with a common data electrode (18)"

Accordingly, the claims require inter alia associating a group of pixels representing different colors with a common data electrode.

The examiner fails to show a teaching or suggestion of the limitations in the applied prior art. "'A prima facie case of obviousness is established when the teachings from the prior art itself would appear to have suggested the claimed subject matter to a person of ordinary skill in the art.'" In re Bell, 991 F.2d 781, 782, 26 USPQ2d 1529, 1531 (Fed. Cir. 1993) (quoting In re Rinehart, 531 F.2d 1048, 1051, 189 USPQ 143, 147 (CCPA 1976)). "The Patent Office has the initial duty of supplying the factual basis for its rejection. It may not ... resort to

speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in its factual basis." In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967). "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristic necessarily flows from the teachings of the applied prior art." Ex parte Levy, 17 USPQ2d 1461, 1464 (Bd. Pat. App. & Int. 1990) (citing In re King, 801 F.2d 1324, 231 USPQ 136 (Fed. Cir. 1986); W.L. Gore & Assocs. v. Garlock, Inc., 721 F.2d 1540, 220 USPQ 303 (Fed. Cir. 1983); In re Oelrich, 666 F.2d 578, 212 USPQ 323 (CCPA 1981); In re Wilding, 535 F.2d 631, 190 USPQ 59 (CCPA 1976); Hansgirg v. Kemmer, 102 F.2d 212, 40 USPQ 665 (CCPA 1939)).

Here, the section of Tanamachi cited by the examiner mentions that, "in the case of a color display device, a plurality of color filters are formed so as to be associated with the signal electrodes D, respectively." Col. 7, ll. 26-28. Although the reference's plurality of color filters are associated with its signal electrodes, the examiner fails to

provide a factual basis or technical reasoning to reasonably support a determination that more than one of the color filters is associated with the same signal electrode. To the contrary, it is possible that only one of the color filters is associated with each of the signal electrodes.

Because no factual basis or technical reasoning supports a determination that more than one of Tanamachi's color filters is associated with one of its signal electrodes, we are not persuaded that the teachings from the applied prior art would have suggested the limitations of "color filters being associated with the pixelelements (16) for obtaining groups (G) of adjacent pixelelements (16) representing different colors enabling display of a color picture, characterized in that the display device is adapted to comprise groups (G) of pixelelements (16) each being constituted with a common data electrode (18)" Therefore, we reverse the rejection of claims 1-4 as being obvious over Tanamachi. We proceed to the second rejection.

II. Rejection over Buzak in view of Kitajima

At the outset, we note that claims that are not argued separately stand or fall together. In re Kaslow, 707 F.2d 1366, 1376, 217 USPQ 1089, 1096 (Fed. Cir. 1983) (citing In re Burckel, 592 F.2d 1175, 201 USPQ 67 (CCPA 1979)). When the patentability of dependent claims is not argued separately, moreover, the claims stand or fall with the claims from which they depend.

In re King, 801 F.2d 1324, 1325, 231 USPQ 136, 137 (Fed. Cir. 1986)(citing In re Sernaker, 702 F.2d 989, 991, 217 USPQ 1, 3 (Fed. Cir. 1983) and Burckel, 592 F.2d at 1178-79, 201 USPQ at 70.) Here, the appellant indicates, "[c]laims 1, 3 ... stand together." (Appeal Br. at 6.) Therefore, the claims stand or fall together in a group. We select claim 1 to represent the group.

The appellant argues, "[t]here is no teaching or suggestion in either Buzak et al. or Kitajima et al. that a group of pixel elements representing different colors is associated with a common data electrode" (Appeal Br. at

9.) The examiner "disagrees with that since Kitajima et al teach such feature(see figure 25)." (Examiner's Answer at 5.)

For the reasons explained regarding the rejection over Tanamachi, representative claim 1 requires inter alia associating a group of pixels representing different colors with a common data electrode. The applied prior art would have suggested the limitations. More specifically, "FIGS. **24** and **25** [of Kitajima] are block diagrams illustrating two different embodiments for the color display drive" Col. 3, ll. 10-11. In the embodiment of Figure 24, "color filters of R (red), G (green) and B (blue) are arranged in the vertical direction." Col. 7, ll. 67 - col. 8, l. 1. The appellant observes, "[i]n Fig. 24, the color filters are arranged vertically (ie, R is associated with one column (data) electrode, G with the next column electrode, and so forth)." (Appeal Br. at 8.) In contrast, the embodiment of Figure 25 shows a group of color filters (viz., a red filter,

a green filter, and a blue filter) associated with each of the column data electrodes.

Because Kitajima shows a group of color filters associated with each of the column data electrodes, we are persuaded that the teachings from the applied prior art would have suggested the limitations of "color filters being associated with the pixelelements (16) for obtaining groups (G) of adjacent pixelelements (16) representing different colors enabling display of a color picture, characterized in that the display device is adapted to comprise groups (G) of pixelelements (16) each being constituted with a common data electrode (18)" Therefore, we affirm the rejection of claims 1 and 3 as being obvious over Buzak in view of Kitajima.

The appellant further argues, "[c]laim 2 calls for a plasma driver circuit for selectively activating the plasma channels in a group, and a data driver circuit for supplying a group of primary color signals sequentially to a common driver electrode. This is in contrast to the prior art arrangement

(eg., Buzak et al.) in which the plasma channels are activated one-by-one, and each primary color signal is applied to a separate data electrode." (Appeal Br. at 10.) The examiner does not respond to the argument but merely observes, "Buzak et al teach a display device comprising a plasma driver circuit(28) and a data driver circuit(24)" (Examiner's Answer at 4.)

Claims 2 and 4 specify in pertinent part the following limitations: "a plasma driver circuit (28) coupled to selectively activate the plasma channels (20) in a group for selecting pixelelements (16) associated with the activated plasma channel (20), and a data driver circuit (24) receiving a video information V, and supplying colour data signals each representing one of a group of primary colours to the common data electrode (18) one by one" Accordingly, the claims require inter alia selectively activate plasma channels in a group and supplying signals each representing one of a group of primary colors to a common data electrode one-by-one.

The examiner fails to show a teaching or suggestion of the limitations in the applied prior art. "In rejecting claims under 35 U.S.C. Section 103, the examiner bears the initial burden of presenting a prima facie case of obviousness." In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993)(citing In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992)). "If examination at the initial stage does not produce a prima facie case of unpatentability, then without more the applicant is entitled to grant of the patent." Oetiker, 977 F.2d at 1445, 24 USPQ2d at 1444 (citing In re Grabiak, 769 F.2d 729, 733, 226 USPQ 870, 873 (Fed. Cir. 1985) and In re Rinehart, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976)).

Here, Buzak teaches that "[c]olumn electrodes **18** receive data drive signals of the analog voltage type developed on parallel output conductors **22'** by different ones of the output amplifiers **22** (FIGS. 2-6) of a data driver or drive drive [sic] circuit **24**, and channels **20** receive data strobe signals

of the voltage pulse type developed on parallel output conductors **26'** by different ones of the output amplifiers **26** (FIGS. 2-6) of a data strobe or strobe means or strobe circuit **28."** Col. 6, ll. 52-60. The examiner fails to allege, let alone show, however, that the data strobe selectively activates plasma channels in a group or that the data strobe supplies signals each representing one of a group of primary colors to a common data electrode one-by-one. Accordingly, we are not persuaded that the teachings from the applied prior art would have suggested the limitations of "a plasma driver circuit (28) coupled to selectively activate the plasma channels (20) in a group for selecting pixelelements (16) associated with the activated plasma channel (20), and a data driver circuit (24) receiving a video information V, and supplying color data signals each representing one of a group of primary colours to the common data electrode (18) one by one" Therefore, we reverse the rejection of claims 2 and 4 as being obvious over Buzak in view of Kitajima.

CONCLUSION

In summary, the rejection of claims 1-4 under § 103(a) as being obvious over Tanamachi and the rejection of claims 2 and 4 as being obvious over Buzak in view of Kitajima are reversed. The rejection of claims 1 and 3 under § 103(a) as being obvious over Buzak in view of Kitajima, however, is reversed. The affirmance is based only on the arguments made in the briefs. Arguments not made therein are neither before us nor at issue but are considered waived.

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

AFFIRMED-IN-PART

JAMES D. THOMAS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
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