

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 KAZUMI SAKUMOTO, HIROSHI ODAGIRI, SUSUMU FUJITA, MASAFUMI
HOSHINO and TOUYA AKASE

Appeal No. 2004-1675
Application No. 09/638,214

ON BRIEF

Before GARRIS, PAK, and RUGGIERO, Administrative Patent Judges.
PAK, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on an appeal under 35 U.S.C. § 134 from the examiner's refusal to allow claims 16 through 39, which are all of the claims pending in the above-identified application.

APPEALED SUBJECT MATTER

The subject matter on appeal is directed to a self-luminous display element driving device. See the Specification, page 1. Further details of the appealed subject matter are recited in claims 16, 24 and 32 reproduced below:

16. A self-luminous display element driving device for voltage driving a self-luminous display element, comprising:

a driving circuit for driving the self-luminous display element by controlling the application of a driving voltage to the self-luminous display element;

a voltage generating circuit for supplying the driving voltage to the driving circuit; and

a deterioration information generating circuit for detecting a voltage supplied to the self-luminous display element and generating deterioration information indicating an amount of deterioration of the self-luminous display element based on the detected voltage;

wherein the driving voltage generated by the voltage generating circuit is varied in accordance with the deterioration information generated by the deterioration information generating circuit so that the driving voltage is increased as the self-luminous display element deteriorates.

24. A self luminous display element driving device for voltage driving a self-luminous display element, comprising:

a driving circuit for driving the self-luminous display element by controlling the application of a driving voltage to the self-luminous display element;

a voltage generating circuit for supplying the driving voltage to the driving circuit; and

a deterioration information generating circuit for generating deterioration information indicating an amount of deterioration of the self-luminous display element based on elapsed time;

wherein the driving voltage generated by the voltage generating circuit is varied based on the deterioration information such that the driving voltage is increased with the elapse of time.

32. A self-luminous display element driving device for voltage driving a self-luminous display element, comprising:

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a driving circuit for driving the self-luminous display element by controlling the application of a driving voltage to the self-luminous display element;

a voltage generating circuit for supplying the driving voltage to the driving circuit;

a constant-current driving circuit for driving the self-luminous display element at a constant current; and

a voltage detecting circuit for detecting a voltage drop across the self-luminous display element that is driven by the constant-current driving circuit; wherein

the driving voltage generated by the voltage generating circuit is varied in accordance with the voltage drop detected by the voltage detecting circuit such that the driving voltage is increased to compensate for deterioration of the self-luminous display element.

PRIOR ART REFERENCES

The examiner relies on the following prior art references:

Nakamura et al. (Nakamura)	5,427,858	Jun. 27, 1995
Asai	5,623,273	Apr. 22, 1997
Yuyama	6,069,676	May 30, 2000

REJECTION

The appealed claims stand rejected as follows:

- 1) Claims 16 through 18, 22, 24 through 26, 30, 32, 33, 35 and 38 under 35 U.S.C. § 102(e) as anticipated by the disclosure of Yuyama;
- 2) Claims 23, 31 and 39 under 35 U.S.C. § 103(a) as unpatentable over the disclosure of Yuyama;

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- 3) Claims 19, 27 and 34 under 35 U.S.C. § 103 as unpatentable over the combined disclosures of Yuyama and Nakamura; and
- 4) Claims 20, 21, 28, 29, 36 and 37 under 35 U.S.C. § 103 as unpatentable over the combined disclosures of Yuyama and Asai.

OPINION

We have carefully reviewed the claims, specification and prior art, including all of the arguments advanced by both the examiner and the appellants in support of their respective positions. This review has led us to conclude that the examiner's Sections 102(e) and 103(a) rejections are not well founded. Accordingly, we shall not sustain the examiner's Sections 102 (e) and 103(a) rejections for those reasons articulated by the appellants in their Brief and Reply Brief. We add the following primarily for emphasis.

The examiner finds (the Answer, pages 3-9), and the appellants do not dispute (the Brief, pages 7-16 and the Reply Brief, pages 1-7), that Yuyama describes a self-luminous display element driving device having the claimed driving circuit, voltage generating circuit and constant-current driving circuit. The appellants, however, disagree with the examiner's determination that Yuyama teaches the following limitations recited in claims 16, 24 and 32:

a deterioration information generating circuit for detecting a voltage supplied to the self-luminous display element and generating deterioration information

indicating an amount of deterioration of the self-luminous display element based on the detected voltage [in claim 16]...

a deterioration information generating circuit for generating deterioration information indicating an amount of deterioration of the self-luminous display element based on elapsed time [in claim 24]...

a voltage detecting circuit for detecting a voltage drop across the self-luminous display element that is driven by the constant-current driving circuit [in claim 32]...

What Yuyama teaches is using a photosensor for detecting "the luminance of the corresponding LED, and produces a signal the voltage of which depends on the detected luminance." See column 3, lines 30-33. In other words, Yuyama operates a voltage driving circuit to depends the deterioration of the LED determined by the photosensor measuring luminance.

The dispositive question here is whether the above limitations recited in claims 16, 24 and 32 embrace the photosensor of Yuyama. On this record, we answer this question in the negative.

The appellants, like Yuyama, recognize that the luminance of the LED decreases with time and the current and voltage flowing through the LED affect the luminance of the LED. Compare the specification, page 3, with Yuyama, column 1, lines 56-65 and column 3, lines 45-50. The appellants, therefore, disclose four

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embodiments for solving this problem. See the specification in its entirety. One of the four embodiments described in the specification is directed to employing an optical sensor for detecting the luminance of the self-luminous display element to maintain constant luminance. See the specification, page 3. This embodiment, according to the appellants, is distinct from the other three embodiments, i.e., the deterioration information generating and voltage detecting circuits, recited in claims 16, 24 and 32. See the specification in its entirety. Thus, having interpreted the deterioration information generating and voltage detecting circuits recited in claims 16, 24 and 32 consistent with the specification, we are constrained to agree with the appellants that such circuits do not embrace the photosensor of Yuyama within the meaning of 35 U.S.C. § 102(e).

We also note that in addition to the examiner's Section 102(e) rejection above, the examiner relies on the disclosures of Yuyama, Nakamura and Asai to establish obviousness of the subject matter recited in certain dependent claims. As such, the examiner does not provide any explanation why these references would have rendered the deterioration information generating and voltage detecting circuits recited in independent claims 16, 24 and 32

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obvious to one of ordinary skill in the art within the meaning of 35 U.S.C. § 103(a).

In view of the foregoing, we are constrained to reverse the examiner's Sections 102(e) and 103(a) rejections.

OTHER ISSUES

As indicated *supra*, Yuyama describes a self-luminous display element driving device corresponding to those recited in claims 16, 24 and 32, except for the claimed deterioration information generating and voltage detecting circuits. Rather than operating a voltage driving circuit to compensate for the deterioration of the self-luminous display element determined by the deterioration information generating and voltage detecting circuits recited in claims 16, 24 and 32, Yuyama operates the voltage driving circuit to compensate for the deterioration of the self-luminous display element determined by a photosensor measuring luminance. However, Yuyama, like the appellants, recognizes that the luminance of the LED decreases with time and the current and voltage flowing through the LED affect the luminance of the LED. Compare the specification, page 3, with Yuyama, column 1, lines 56-65 and column 3, lines 27-54. The appellants also acknowledge (the specification, pages 13 and 16) that

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the current detecting circuit is a conventional technique well known to one skilled in the art [and]...

the constant-current driving circuit and the voltage detecting circuit are conventional techniques well known to one skilled in the art...

Yuyama also shows in Figures 16 and 17 that deterioration of luminance of the LED is a function of time.

Thus, upon return of this application, the examiner is advised to determine:

- 1) Whether the combined teachings of Yuyama and the admitted prior art discussed above would have rendered the subject matter defined by claims 16 through 18, 22 through 24 through 26, 30 through 33, 38 and 39 obvious to one of ordinary skill in the art; and
- 2) Whether the combined teachings of Yuyama, the admitted prior art, Nakamura and Asai would have rendered the subject matter defined by claims 19 through 21, 27 through 29, 34, 36 and 37 obvious to one of ordinary skill in the art.

If the examiner determines that the prior art teachings above would have rendered the subject matter defined by any of the claims on appeal obvious, the examiner must reopen the prosecution of this application.

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CONCLUSION

In summary, we reverse the examiner's decision rejecting the claims on appeal under 35 U.S.C. §§ 102(e) and 103 and remand the application to the examiner to take appropriate action consistent with the instruction provided above.

This application, by virtue of its "special" status, requires immediate action, see MPEP & 708.01 (8th ed. Aug. 2001), item (D). It is important that the Board of Patent Appeals and Interferences be promptly informed of any action affecting the appeal in this case.

This remand to the examiner pursuant to 37 CFR § 41.50(a)(1) (effective September 13, 2004, 69 Fed. Reg. 49960 (August 12, 2004), 1286 Off. Gaz. Pat. Office 21 (September 7, 2004) is **not** made for further consideration of a rejection. Accordingly, 37 CFR § 41.50 (a)(2) does not apply.

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REVERSED/REMANDED

BRADLEY R. GARRIS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
CHUNG K. PAK)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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JOSEPH F. RUGGIERO)	
Administrative Patent Judge)	

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