

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

---

*Ex parte* KATSUHIKO KUMAGAWA, HIROYUKI YAMAKITA,  
MASANORI KIMURA and AKIO TAKIMOTO

---

Appeal 2008-1294  
Application 10/398,385  
Technology Center 2800

---

Decided: September 26, 2008

---

Before MAHSHID D. SAADAT, ROBERT E. NAPPI,  
and KEVIN F. TURNER, *Administrative Patent Judges*.

TURNER, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Appellants appeal under 35 U.S.C. § 134 from the Final Rejection of claims 34 and 35. We have jurisdiction under 35 U.S.C. § 6(b). We reverse.

Appellants' claimed invention relates to display devices such as liquid crystal display devices and method of driving those devices. (Spec. 1: 4-6). The system reduces flicker by canceling variances in brightness through the addition of a prescribed brightness compensation voltage. (Spec. 89: 4-23).

Claims 1-39 are pending in the instant application, where claims 1-33 and 36-39 have been withdrawn from consideration. Independent claim 34 is illustrative of the invention and reads as follows:

34. A drive method of a display device having:

an array substrate;

an opposing substrate facing the array substrate; and

an electro-optic substance held between the array substrate and the opposing substrate,

the array substrate being provided with:

a plurality of gate wirings and a plurality of source wirings intersecting each other;

a pixel electrode disposed in a region defined by two adjacent gate wirings and two adjacent source wirings;

a switching element for switching a voltage applied to the pixel electrode from the source wiring based on a signal voltage supplied from the gate wiring;

a common wiring formed between the two adjacent gate wirings; and

an opposing electrode being electrically connected to the common wiring and generating an electric field for driving the

electro-optic substance between the opposing electrode and the pixel electrode whereto a voltage is applied,

the pixel electrode and the opposing electrode being made of the materials having different transmittances,

said method comprising the step of adding a prescribed brightness compensation voltage to the voltage applied to the pixel electrode.

The Examiner relies on the following prior art references to show unpatentability:

Ohta	US 6,532,053 B2	Mar. 11, 2003
Johnson	WO 99/21161	Apr. 29, 1999

Claims 34 and 35 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ohta and Johnson.

Rather than reiterate the arguments of Appellants and the Examiner, reference is made to the Briefs and Answer for the respective details. Only those arguments actually made by Appellants have been considered in this decision. Arguments which Appellants could have made but chose not to make in the Briefs have not been considered and are deemed to be waived [see 37 C.F.R. § 41.37(c)(1)(vii)].

### ISSUES

Under 35 U.S.C. § 103(a), with respect to appealed claims 34 and 35, do Ohta and Johnson teach or suggest all of the elements of those claims to render them unpatentable?

## FINDINGS OF FACT

1. The Specification details that an electro-optic material can be driven by applying a voltage between two electrodes having different transmittances to prevent flicker in a display device. The display device includes an array substrate, an opposing substrate and an electro-optic substance held therebetween. The device includes numerous wirings and electrodes that drive the electro-optic substance when a voltage is applied. (Spec. 4:23 – 5:2; 19:6-23; Figs. 37(a) and 37(b), elements 1-7, 9, 201, and 202).

2. Compensation for the image signal is performed by adding brightness compensation signals,  $S1'$ ,  $-S2'$ , to the image signal  $S1$ . The variance in the electric potential of the drive voltage is decreased and the displayed image becomes darker. This allows for a reduction in flicker by canceling the variance in brightness caused by polarities regardless of the number of electrodes. (Spec. 88:11-22; 89:15-23; Fig. 39(b)).

3. Independent claim 34 recites, in part, “said method comprising the step of adding a prescribed brightness compensation voltage to the voltage applied to the pixel electrode.”

4. Ohta describes an active matrix type liquid crystal display device having pixel electrodes and opposed electrode capable of applying an electric field substantially parallel to a substrate surface. The structure also has gate and source wirings that are used to control a switching element that applies voltage to the pixel electrode. (Abstract, col. 12, l. 32 – col. 14, l. 34; Figs. 2 and 23, elements LC, SUB1, SUB2, CL, CT, DL, GL, GT, PX, and TFT).

5. Johnson describes a display device having a TFT-matrix with a capacitive coupling, where flicker is prevented by providing the selection lines with an auxiliary signal a short time before or after selection. The auxiliary signals provide temporary increases in transmission to compensate for the reductions which cause the flicker to occur. (Abstract; 5, ll. 17-28; Fig. 5a).

#### PRINCIPLES OF LAW

In rejecting claims under 35 U.S.C. § 103, it is incumbent upon the Examiner to establish a factual basis to support the legal conclusion of obviousness. See *In re Fine*, 837 F.2d 1071, 1073 (Fed. Cir. 1988). In so doing, the Examiner must make the factual determinations set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 17 (1966). “[T]he examiner bears the initial burden, on review of the prior art or on any other ground, of presenting a *prima facie* case of unpatentability.” *In re Oetiker*, 977 F.2d 1443, 1445 (Fed. Cir. 1992). Furthermore,

“there must be some articulated reasoning with some rational underpinning to support the legal conclusion of obviousness’ . . . [H]owever, the analysis need not seek out precise teachings directed to the specific subject matter of the challenged claim, for a court can take account of the inferences and creative steps that a person of ordinary skill in the art would employ.”

*KSR Int’l Co. v. Teleflex Inc.*, 127 S. Ct. 1727, 1741 (2007)(quoting *In re Kahn*, 441 F.3d 977, 988 (Fed. Cir. 2006)).

During examination, the claims must be interpreted as broadly as their terms reasonably allow. *In re Am. Acad. of Sci. Tech Center*, 367 F.3d 1359, 1369 (Fed. Cir. 2004). When the specification states the meaning that a term

in the claim is intended to have, the claim is examined using that meaning, in order to achieve a complete exploration of the applicant's invention and its relation to the prior art. *In re Zletz*, 893 F.2d 319, 321-22 (Fed. Cir. 1989).

### ANALYSIS

Appellants argue that the combination of Ohta and Johnson fail to teach or suggest all of the elements of claims 34 and 35 because Johnson neither teaches nor suggests adding a prescribed brightness compensation voltage to the voltage applied to the pixel electrode, but instead discloses presenting the auxiliary signal before or after the voltage is applied to the pixel electrode. (App. Br. 6). Appellants insist that two voltages that are applied at different times are merely applied independently and not added, as recited in claims 34 and 35. (Reply Br. 2).

The Examiner finds that Johnson shows the pixel electrode voltage having different waveforms with and without prescribed brightness compensation voltage and this is sufficient to show the disputed step in claims 34 and 35. (Ans. 7). However, we find that this is not necessarily the same as the step recited in Appellants' claims since the Examiner acknowledges that the auxiliary signal precedes or follows the selection signal. (Ans. 6). The fact that flicker is reduced in both Johnson and the instant claims through changes in brightness does not demonstrate that the same method step occurs in each.

The Examiner also find that while Johnson details that the auxiliary signals are presented before or after selection signal, (FF 5), this is immaterial as to whether Johnson discloses the claimed limitations. (Ans. 8). The Examiner finds that the claim language does not specify a particular

time period for adding a brightness compensation voltage and it is not necessary that a brightness compensation voltage occur concurrently with a selection signal in order to teach the claimed limitation. (Ans. 8). With respect to the invention as claimed, we do not agree.

The clear meaning of claimed limitation “adding a prescribed brightness compensation voltage to the voltage applied to the pixel electrode” is that the voltages are added. (FF 3). In the context of the application and to be consistent with the Specification and the Drawings, added voltages are summed such that a resulting voltage has a greater potential if both voltages have the same polarity. In Johnson, the auxiliary voltage is presented before or after the selection signal and cannot be said to be added thereto. To find otherwise would run counter to a general understanding of the addition of voltages according to one of ordinary skill in the art. In addition, there is no suggestion in the rejection that the presentation of a voltage before or after would render the concurrent addition to be obvious. Thus, we find that Johnson fails to teach or suggest “adding a prescribed brightness compensation voltage to the voltage applied to the pixel electrode,” as claimed. Since this claim element is acknowledged as not being taught by Ohta, (Ans. 4), we find the rejection of claims 34 and 35 to be improper.

#### CONCLUSION

In summary, we have reversed the Examiner’s rejection of claims 34 and 35 under 35 U.S.C. § 103(a) as unpatentable over Ohta and Johnson.

Appeal 2008-1294  
Application 10/398,385

DECISION

The Examiner's rejection of claims 34 and 35 before us on appeal is reversed.

REVERSED

KIS

McDermott Will & Emery  
600 13th Street N W  
Washington, DC 20005-3096