

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 15

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JOHN SONG, KAREN E. JACHIMOWICZ
and CURTIS D. MOYER

Appeal No. 1998-0942
Application No. 08/324,038

ON BRIEF

Before HAIRSTON, KRASS, and FLEMING, Administrative Patent Judges.

KRASS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1-28, all of the pending claims.

The invention is directed to a miniature virtual display used in a portable electronic device.

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Representative independent claim 1 is reproduced as follows:

1. A portable electronic device with virtual display comprising a portable data source and a miniature virtual image display having a viewing aperture, the display being operably attached to the portable data source for receiving data therefrom and having image generation apparatus including a two-dimensional array of LEDs for providing a real image including one of a plurality of lines of alpha- numerics and graphics from the received data, the real image having a luminance of less than approximately 15 fL, and a fixed optical system for producing, from the real image, a virtual image with a dark background and shielded from ambient light reflection perceivable through the viewing aperture in indoor and outdoor environments.

The examiner relies on the following references:

Brennan et al. (Brennan) 28, 1978	4,076,978	Feb.
Nishizawa et al. (Nishizawa) 11, 1982	4,329,625	May
Villa-Real 1984	4,481,382	Nov. 06,
Honma 1984	4,481,506	Nov. 06,
Sakurai 1991	4,991,935	Feb. 12,
Tanielian et al. (Tanielian) 24, 1991	5,051,738	Sep.
Gaskill 1991	5,065,423	Nov. 12,
	(Filed on Nov. 03, 1989)	
Sniff 1996	5,485,145	Jan. 16,
	(Filed on Mar. 11, 1991)	

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Eggleden

WO/86/06238

Oct. 23, 1986

Claims 1-8, 10-22, 24-26 and 28 stand provisionally rejected under obviousness-type double patenting as being obvious over claims 16-33 of Application Serial No. 08/231,570 over claims 1-12 and 14-18 in view of Nishizawa and Sniff.

Claims 9, 23 and 27 stand provisionally rejected under obviousness-type double patenting over claims 16, 17, 21, 24, 31 and 32 of Application Serial No. 08/231,570 in view of Nishizawa, Sniff and Honma.

Claims 1-5, 7, 10-12 and 15-19 stand rejected under 35 U.S.C. § 103 as unpatentable over Eggleden in view of Villa-Real, Brennan, Nishizawa and Sniff.

Claims 6, 8, 14, 20-22, 24-26 and 28 stand rejected under 35 U.S.C. § 103 as unpatentable over Eggleden in view of Villa-Real, Brennan, Nishizawa, Sniff and Tanielian.

Claim 13 stands rejected under 35 U.S.C. § 103 as unpatentable over Eggleden, Villa-Real, Brennan and Nishizawa in view of Gaskill.

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Claims 9, 23 and 27 stand rejected under 35 U.S.C. § 103 as unpatentable over Eggleden in view of Villa-Real, Brennan, Nishizawa, Tanielian and Honma.

Rather than reiterate the arguments of appellants and the examiner, reference is made to the brief and answer for the respective positions thereof.

OPINION

Turning first to the provisional double patenting rejections, we will not sustain these rejections as we do not find a prima facie case of obviousness-type double patenting established by the examiner.

In the first place, the statement of rejection against claims 1-8, 10-22, 24-26 and 28 under obviousness-type double patenting is not clear since it is confusing as to what is being referenced by "claims 1-12 and 14-18" in the statement of rejection. We would normally remand for an explanation but appellants appear to understand the rejection to refer to an alternative rejection based on either claims 16-33 of Application Serial No. 08/231,570 OR claims 1-12 and 14-18 of

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Application Serial No. 07/767,178, in view of Nishizawa and Sniff.

Assuming that this is the correct interpretation of the rejection, that part of the rejection based on Application Serial No. 07/767,178 must fail since that application has been abandoned, as noted in our decision of March 28, 2000.

With regard to the part of the rejection based on claims 16-33 of Application Serial No. 08/231,570, that application has since matured into U.S. Patent No. 6,157,353. Assuming claims 16-33 of Application Serial No. 08/231,570 correspond, respectively, to now patented claims 1-18, the claims in the patent all relate to multiple visual displays including a miniature virtual image display and a real image display where an optical system is employed for receiving the real image and magnifying it to produce the virtual image, whereas the instant claims, while similar, are narrower in some respects. In particular, the instant claims each requires that the real image has "a luminance of less than approximately 15fL" and that the virtual image produced from the real image has "a dark background and shielded from ambient light reflection

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perceivable through the viewing aperture in indoor and outdoor environments." Independent claim 10 further requires that the magnification produced by the optical system be "more than approximately 10x." Moreover, dependent claim 27, for example, requires that each pixel in the LED array utilizes "less than approximately 50A of current in an ON condition."

None of these additional limitations are in the patented claims and the examiner recognizes this. Thus, the examiner turns to Nishizawa for a teaching of a display comprising a plurality of LEDs wherein the luminance of the LEDs is proportional to the value of the current flowing therethrough. From this, the examiner concludes that it would have been obvious "to obtain the luminance of LEDs which is less than 15 feet [sic, fL] since the luminous intensity of LEDs *could* be decreased from 100 to zero vs current" [answer-page 4; emphasis ours].

The examiner's reasoning is faulty since there is no suggestion within Nishizawa for having a real image luminance of "less than approximately 15fL," as claimed. Yes, it is possible that the luminance in Nishizawa *could* be decreased to

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the value claimed by appellants but unless the prior art suggests some reason to do so, the examiner's reasoning appears to be based on hindsight gained from appellants' own disclosure. This is not the proper test for obviousness.

As appellants explain, at page 12 of the brief, the current in Nishizawa is varied in accordance with the ambient light so that it would appear that a very high current would be needed in sunlight in order to produce sufficient luminance to perceive the display. However, the instant claimed invention uses the same amount of current to produce the same amount of luminance [less than approximately 15 fL] in various environments (sunlight or darkness). Thus, appellants appear to have a specific reason for choosing the particular values set forth in the instant claims and the examiner has pointed to nothing which would have suggested the particular values of luminance claimed.

The examiner also relies on Sniff for an alleged teaching that a virtual display could be viewed in indoor and outdoor environments with a dark background. Sniff is directed to a simple EXIT sign, or, more generally, to a conversion kit for

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converting incandescent lighting structures to electroluminescent illumination structures. We find no relevance in this reference to the virtual image display of the instant claimed invention and we find nothing within the teachings of Sniff which would provide for the deficiencies, noted supra, with regard to Nishizawa.

Accordingly, we will not sustain the rejection of claims 1-8, 10-22, 24-26 and 28 under obviousness-type double patenting.

Similarly, we will not sustain the obviousness-type double patenting rejection of claims 9, 23 and 27 over claims 16, 17, 21, 24, 31 and 32 of Application Serial No. 08/231,570 [now U.S. Patent No. 6,157,353] in view of Nishizawa, Sniff and Honma. Claims 9, 23 and 27 are dependent claims and the additional reference to Honma does not provide for the deficiencies, noted supra, of the other references.

For similar reasons, we also will not sustain any of the rejections under 35 U.S.C. § 103. Although the examiner applies many references, in various combinations, against the

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claims, each of the instant claims requires that the real image has "a luminance of less than approximately 15fL" and that the virtual image produced from the real image has "a dark background and shielded from ambient light reflection perceivable through the viewing aperture in indoor and outdoor environments." Of all of the references applied by the examiner, the examiner relies on Nishizawa, alone, for a suggestion of having a luminance of less than approximately 15fL. However, the examiner's rationale that it would have been obvious to obtain a luminance which is less than 15 feet [sic, 15fL] "since the luminous intensity of LEDs could be decreased from 100 to zero vs current" [answer-page 7] is not persuasive. The examiner has failed to point to anything in the applied references suggesting the particular luminance claimed and the examiner's rationale suggests that hindsight is the only reason for the artisan to have established a real image with a luminance of less than approximately 15fL.

Thus, the rejection of claims 1-28 under 35 U.S.C. § 103 is reversed.

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We have not sustained the rejection of claims 1-28 under obviousness-type double patenting nor have we sustained the rejection of claims 1-28 under 35 U.S.C. § 103.

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Accordingly, the examiner's decision is reversed.

REVERSED

KENNETH W. HAIRSTON)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
ERROL A. KRASS)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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MICHAEL R. FLEMING)	
Administrative Patent Judge)	

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REVERSED

Prepared: May 21, 2002