

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 19

UNITED STATES PATENT AND TRADEMARK OFFICE

---

BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

---

Ex parte NICHOLAS J. N. MURPHY

---

Appeal No. 1999-1845  
Application No. 08/659,132

---

HEARD: June 14, 2001

---

Before JERRY SMITH, BARRETT, and BARRY, Administrative Patent Judges.  
JERRY SMITH, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal under 35 U.S.C. § 134 from the examiner's rejection of claims 1-21, which constitute all the claims in the application.

The disclosed invention pertains to a graphics processing system in which the same address locations of a buffer memory are used to store both color values and depth values.

Representative claim 1 is reproduced as follows:

Appeal No. 1999-1845  
Application No. 08/659,132

1. A rendering system comprising:  
means for decomposing primitives into fragments to be rendered;  
a processor for computing depth values, and color values including a blending parameter, for individual ones of said fragments;  
means for reading a local buffer memory in which depth and/or color values are stored, and for comparing the compound depth values for individual ones of said fragments against values retrieved from said local buffer, and conditionally storing the computed depth or color values depending on the results of the comparison;  
and  
circuitry for forcing the blend parameter to a predetermined value;  
whereby said circuitry for forcing can assure that no color value will ever be equal to a depth value, even when color and depth values are overwritten into the same set of address locations.

The examiner relies on the following references:

Deering	4,885,703	Dec. 05, 1989
Hardy et al. (Hardy)	5,640,496	Jun. 17, 1997
		(filed Feb. 04, 1991)

Claims 1-21 stand rejected under 35 U.S.C. § 103. As evidence of obviousness the examiner offers Deering in view of Hardy.

Appeal No. 1999-1845  
Application No. 08/659,132

Rather than repeat the arguments of appellant or the examiner, we make reference to the brief and the answer for the respective details thereof.

OPINION

We have carefully considered the subject matter on appeal, the rejection advanced by the examiner and the evidence of obviousness relied upon by the examiner as support for the rejection. We have, likewise, reviewed and taken into consideration, in reaching our decision, the appellant's arguments set forth in the brief along with the examiner's rationale in support of the rejection and arguments in rebuttal set forth in the examiner's answer.

It is our view, after consideration of the record before us, that the evidence relied upon and the level of skill in the particular art would not have suggested to one of ordinary skill in the art the obviousness of the invention as set forth in claims 1-21. Accordingly, we reverse.

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, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988). In

Appeal No. 1999-1845  
Application No. 08/659,132

so doing, the examiner is expected to make the factual determinations set forth in Graham v. John Deere Co., 383 U.S. 1, 17, 148 USPQ 459, 467 (1966), and to provide a reason why one having ordinary skill in the pertinent art would have been led to modify the prior art or to combine prior art references to arrive at the claimed invention. Such reason must stem from some teaching, suggestion or implication in the prior art as a whole or knowledge generally available to one having ordinary skill in the art. Uniroyal, Inc. v. Rudkin-Wiley Corp., 837 F.2d 1044, 1051, 5 USPQ2d 1434, 1438 (Fed. Cir.), cert. denied, 488 U.S. 825 (1988); Ashland Oil, Inc. v. Delta Resins & Refractories, Inc., 776 F.2d 281, 293, 227 USPQ 657, 664 (Fed. Cir. 1985), cert. denied, 475 U.S. 1017 (1986); ACS Hosp. Sys., Inc. v. Montefiore Hosp., 732 F.2d 1572, 1577, 221 USPQ 929, 933 (Fed. Cir. 1984). These showings by the examiner are an essential part of complying with the burden of presenting a prima facie case of obviousness. Note In re Oetiker, 977 F.2d 1443, 1445, 24 USPQ2d 1443, 1444 (Fed. Cir. 1992). If that burden is met, the burden then shifts to the applicant to overcome the prima facie case with argument and/or evidence. Obviousness is then determined on the basis

Appeal No. 1999-1845  
Application No. 08/659,132

of the evidence as a whole and the relative persuasiveness of the arguments. See Id.; In re Hedges, 783 F.2d 1038, 1039, 228 USPQ 685, 686 (Fed. Cir. 1986); In re Piasecki, 745 F.2d 1468, 1472, 223 USPQ 785, 788 (Fed. Cir. 1984); and In re Rinehart, 531 F.2d 1048, 1052, 189 USPQ 143, 147 (CCPA 1976). Only those arguments actually made by appellant have been considered in this decision. Arguments which appellant could have made but chose not to make in the brief have not been considered [see 37 CFR § 1.192(a)].

With respect to each of independent claims 1, 5, 8 and 10, the examiner finds that Deering teaches the claimed invention except for the recitation of forcing the blending parameter to a predetermined value. Hardy is cited to teach a blend parameter (opacity) which is set to a predetermined value. The examiner finds that it would have been obvious to the artisan to configure Deering's system to include the blend parameter in pixel attributes to yield a visual sense of transparency [answer, pages 3-4].

Appellant argues that the applied prior art does not teach or suggest that the exact same memory locations are used to store both depth and color data so that the total memory

Appeal No. 1999-1845  
Application No. 08/659,132

requirement is reduced as recited in the claims on appeal [brief, pages 9-16]. Although Deering uses separate buffers for storing depth values and color values, the examiner responds that the same address location of each memory is used to respectively store the depth and color values. The examiner finds the language of the claimed invention to be met by this operation.

We agree with appellant that a critical feature of the disclosed invention is not taught or suggested by Deering and Hardy. This critical feature is the use of the same memory locations to separately store the depth values and the color values. The question is whether appellant's claims have properly recited this feature.

A major part of the problem appears to be appellant's use of the phrase "depth and/or color values" or "depth or color values" in the claims. Appellant is clearly ascribing a meaning to the first phrase which requires that depth and color values be considered together whereas the examiner is essentially interpreting the first phrase as being met by either depth values or color values. Thus, the examiner looks at the two buffer memories of Deering as meeting the claimed

Appeal No. 1999-1845  
Application No. 08/659,132

invention because each memory stores depth values or color values. This interpretation is the correct way to interpret claims for purposes of determining patentability over the prior art.

There is one recitation of independent claims 1, 5 and 8, however, that has not been discussed by the examiner. Each of these claims recites that a condition is assured "even when color and depth values are overwritten into the same set of address locations." Appellant argues that the concept of color and depth values being overwritten requires that the same physical memory be used to store both of these values, and is not met by the two separate memories of Deering.

We agree with appellant. Although color and depth values might be written into the same set of address locations in Deering, they would not be overwritten into the same set of address locations because color values and depth values in Deering are stored in separate memories. We interpret the phrase "overwritten into the same address locations" to require that data be written into the same physical space and not just the same address number. Independent claims 1, 5 and 8 require that the same memory store both the color values and

Appeal No. 1999-1845  
Application No. 08/659,132

the depth values by overwriting one with the other. The applied prior art does not teach this feature of the claimed invention.

Although independent claim 10 does not have the limitation quoted above, appellant argues that the applied prior art does not teach the four functionally distinct units operating asynchronously and in a pipelined fashion as recited in claim 10. The examiner responds that Deering teaches polygon processors which perform different functions in a pipeline fashion.

We agree with appellant that the examiner has failed to consider every limitation of independent claim 10. We can find no teaching or suggestion on this record for the claimed recitation of asynchronous operation of the four functionally distinct processing units or that the units are mutually interconnected to provide a pipelined MIMD processing architecture as claimed. The examiner's failure to address these features of claim 10 results in the failure to establish a prima facie case of obviousness.

In conclusion, we have not sustained the examiner's rejection of any of the independent claims on appeal.

Appeal No. 1999-1845  
Application No. 08/659,132

Consequently, we also do not sustain the rejection of any of the claims which depend therefrom. Accordingly, the decision of the examiner rejecting claims 1-21 is reversed.

REVERSED

JERRY SMITH	)	
Administrative Patent Judge	)	
	)	
	)	
	)	
	)	BOARD OF PATENT
LEE E. BARRETT	)	APPEALS
Administrative Patent Judge	)	AND
	)	INTERFERENCES
	)	
	)	
	)	
LANCE LEONARD BARRY	)	
Administrative Patent Judge	)	

Appeal No. 1999-1845  
Application No. 08/659,132

ROBERT GROOVER  
17000 PRESTON ROAD, #230  
DALLAS, TX 75248

# ***Shereece***

Appeal No. 1999-1845  
Application No. 08/659,132

APJ JERRY SMITH

APJ

APJ KEYBOARD()

REVERSED

Prepared: March 27, 2002