

**THIS OPINION WAS NOT WRITTEN FOR PUBLICATION**

The opinion in support of the decision being entered today  
(1) was not written for publication in a law journal and  
(2) is not binding precedent of the Board.

Paper No. 21

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS  
AND INTERFERENCES

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***Ex parte*** CRAIG R. MORGAN

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Appeal No. 95-5026  
Application 07/923,668<sup>1</sup>

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ON BRIEF

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Before THOMAS, HAIRSTON and FLEMING, ***Administrative Patent Judges.***

FLEMING, ***Administrative Patent Judge.***

***DECISION ON APPEAL***

This is a decision on appeal from the final rejection of claims 1 through 22, all of the claims present in the application. The invention generally relates to an apparatus and

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<sup>1</sup>Application for patent filed August 3, 1992.



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Rather than reiterate the arguments of Appellants and the Examiner, reference is made to the briefs<sup>2</sup> and answer for the respective details thereof.

**OPINION**

We will not sustain the rejection of claims 1 through 22 under 35 U.S.C. § 103.

The Examiner has failed to set forth a **prima facie** case. It is the burden of the Examiner to establish why one having ordinary skill in the art would have been led to the claimed invention by the express teachings or suggestions found in the prior art, or by implications contained in such teachings or suggestions. **In re Sernaker**, 702 F.2d 989, 995, 217 USPQ 1, 6 (Fed. Cir. 1983). "Additionally, when determining obviousness, the claimed invention should be considered as a whole; there is no legally recognizable 'heart' of the invention." **Para-Ordnance Mfg. v. SGS Importers Int'l, Inc.**, 73 F.3d 1085, 1087, 37 USPQ2d

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<sup>2</sup>Appellants filed an appeal brief on March 3, 1995. We will refer to this appeal brief as simply the brief. Appellants filed a reply appeal brief on July 27, 1995. We will refer to this reply appeal brief as the reply brief. The Examiner responded to the reply brief with a letter, mailed August 22, 1995, stating that the reply brief has been entered and considered but no further response by the Examiner is deemed necessary.

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1237, 1239 (Fed. Cir. 1995), **cert. denied**, 117 S.Ct. 80 (1996)  
**citing W. L. Gore & Assocs., Inc. v. Garlock, Inc.**, 721 F.2d  
1540, 1548, 220 USPQ 303, 309 (Fed. Cir. 1983), **cert. denied**, 469  
U.S. 851 (1984).

The Examiner argues that Foley teaches matrix transformation of vertex data in a computer. The Examiner admits that Foley fails to teach identifying a shared vertex. The Examiner then points to Einkauf stating that Einkauf implicitly teaches identifying a shared vertex, retrieving world space data and supplying the world space data to a display when a shared vertex is identified.

Appellants argue on pages 12 through 18 of the brief that Foley and Einkauf, either individually or together, fail to teach the Appellants' invention which relates to the reduction of redundant matrix transformations of shared polygonal vertex data as recited in Appellants' independent claims 1 and 13. Appellants further argue that neither Foley nor Einkauf teaches or suggests means for identifying a shared vertex or means for retrieving stored world space data corresponding to said shared vertex and supplying the retrieved world space data corresponding to said shared vertex to a display means when said shared vertex

is identified. We note that Appellants' claim 1 recites these means while Appellants' claim 13 recites method steps that perform these functions. Appellants further emphasize in the reply brief that Foley and Einkauf, either individually or together, fail to teach the Appellants' invention which relates to the reduction of redundant matrix transformations of shared polygonal vertex data as recited in Appellants' claims.

Einkauf teaches in column 1, lines 5-16, that their invention relates in general to a method for determining the intensity and color parameters used to render shaded patterns on a video display. In column 2, lines 39-45, Einkauf teaches a particularized implementation of their invention that involves the use of triangular polygon regions. This particularized implementation is further disclosed in column 4, line 6, through column 5, line 31. There Einkauf discloses that the triangular polygon is divided into a mesh of triangles and then the cross product of the values relating to each vertex of the triangle is calculated. However, Einkauf fails to teach a means for identifying a shared vertex or a means for retrieving stored world space data corresponding to said shared vertex and supplying the retrieved world space data corresponding to said

shared vertex to a display means when said shared vertex is

identified as recited in Appellants' claim 1 or the corresponding methods steps as recited in Appellants' claim 13.

Furthermore, we fail to find any suggestion of modifying Foley and Einkauf to provide an apparatus or method for reducing redundant matrix transformations of shared polygon vertex data as recited in Appellants' claims 1 and 13. The Federal Circuit states that "[t]he mere fact that the prior art may be modified in the manner suggested by the Examiner does not make the modification obvious unless the prior art suggested the desirability of the modification." ***In re Fritch***, 972 F.2d 1260, 1266 n.14, 23 USPQ2d 1780, 1783-84 n.14 (Fed. Cir. 1992), ***citing In re Gordon***, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984). "Obviousness may not be established using hindsight or in view of the teachings or suggestions of the inventor." ***Par Ordnance Mfg.***, 73 F.3d at 1087, 37 USPQ2d at 1239, ***citing W. L. Gore***, 721 F.2d at 1551, 1553, 220 USPQ at 311, 312-13.

On pages 18-24 of the brief, Appellants argue that the remaining claims, claims 2 through 12 and 14 through 22 distinguish over Foley and Einkauf for the same reasons as argued

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for claims 1 and 13. We agree.

We have not sustained the rejection of claims 1 through 22 under 35 U.S.C. § 103. Accordingly, the Examiner's decision is reversed.

***REVERSED***

JAMES D. THOMAS	)	
Administrative Patent Judge	)	
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	)	
	)	BOARD OF PATENT
KENNETH W. HAIRSTON	)	APPEALS AND
Administrative Patent Judge	)	INTERFERENCES
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