

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. 22

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte JOHN ELLENBY, THOMAS ELLENBY
and PETER ELLENBY

Appeal No. 1999-2075
Application No. 08/482,944

ON BRIEF

Before THOMAS, RUGGIERO, and BLANKENSHIP, Administrative Patent Judges.

RUGGIERO, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on the appeal from the final rejection of claims 1-4, which are all of the claims pending in the present application. An amendment filed October 22, 1997 after final rejection was approved for entry by the Examiner.

The disclosed invention relates to a vision system computer modeling apparatus in which an electronic imaging system is combined with a computer aided design system and is in communication with position, attitude, and range measuring devices.

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A model displayed as a two-dimensional figure on a display has an associated perspective related to the perspective of a three-dimensional scene. On movement of the imaging system such that the perspective of the scene changes, the perspective of the model changes in correspondence in accordance with position, attitude, and range measurements with respect to the scene being addressed.

Claim 1 is illustrative of the invention and reads as follows:

1.) An apparatus for creating a computer model at a display comprised of imagery from a real-scene and imagery from the model, the apparatus being comprised of:

a.) an electronic camera in electrical communication with a;

b.) computer operable for running CAD software, acquiring images from said electronic camera, receiving physical measurement information, computing perspective adjustments, combining imagery from said electronic camera with imagery from said CAD software, displaying combined imagery at a display; and

c.) position, attitude and range measurement apparatus in electrical communication with said computer.

The Examiner relies on the following prior art:

Pryor	4,851,905	Jul. 25, 1989
Saunders et al. (Saunders)	5,252,950	Oct. 12, 1993
Fellous	5,479,597	Dec. 26, 1995
		(filed Apr. 27, 1992)

Claim 1 stands finally rejected under 35 U.S.C. § 102(e) as being anticipated by Fellous. Claims 1-4 stand finally rejected under 35 U.S.C. § 103. As evidence of obviousness, the Examiner

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offers Pryor alone with respect to claim 1, and Fellous in view of Saunders with respect to claims 2-4.

Rather than reiterate the arguments of Appellants and the Examiner, reference is made to the Brief (Paper No. 16) and Answer (Paper No. 18) for their respective details.

OPINION

We have carefully considered the subject matter on appeal, the rejections advanced by the Examiner and the evidence of anticipation and obviousness relied upon by the Examiner as support for the rejections. We have, likewise, reviewed and taken into consideration, in reaching our decision, Appellants' arguments set forth in the Brief along with the Examiner's rationale in support of the rejections and arguments in rebuttal set forth in the Examiner's Answer.

It is our view, after consideration of the record before us, that the Fellous reference fully meets the invention as set forth in claim 1. We are also of the view that the Examiner has not established a prima facie case of obviousness with respect to claim 1 based on the Pryor reference, nor with respect to claims 2-4 based on the proposed combination of Fellous and Saunders. Accordingly, we affirm-in-part.

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We consider first the Examiner's 35 U.S.C. § 102(e) rejection of claims 1 as being anticipated by Fellous. Anticipation is established only when a single prior art reference discloses, expressly or under the principles of inherency, each and every element of a claimed invention as well as disclosing structure which is capable of performing the recited functional limitations. RCA Corp. v. Applied Digital Data Systems, Inc., 730 F.2d 1440, 1444, 221 USPQ 385, 388 (Fed. Cir.); cert. dismissed, 468 U.S. 1228 (1984); W.L. Gore and Associates, Inc. v. Garlock, Inc., 721 F.2d 1540, 1554, 220 USPQ 303, 313 (Fed. Cir. 1983), cert. denied, 469 U.S. 851 (1984).

With respect to independent claim 1, the Examiner indicates (Answer, page 3) how the various limitations are read on the disclosure of Fellous. In particular, the Examiner points to the illustration of the imaging system in Figure 1 of Fellous with the accompanying description beginning at column 5, line 1, as well as the depiction of the sensor arrangement in Figure 2 of the drawings.

Appellants' arguments in response assert a failure of Fellous to disclose every limitation in claim 1 as is required to support a rejection based on anticipation. At pages 4 and 5 of the Brief, Appellants' arguments focus on the contention that, contrary to the

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Examiner's interpretation of Fellous, there is no disclosure of the position, attitude, and range measurement apparatus set forth in appealed claim 1.

After reviewing the Fellous reference in light of the arguments of record, we are in general agreement with the Examiner's position as expressed in the Answer. We do not find persuasive Appellants' contention (Brief, page 4) that, while the sensors 28-30 in Fellous provide information as to the geometrical characteristics of the filming system, there is no indication in Fellous that such information includes position, attitude, and range information. We note, however, that, although Fellous may not spell out every detail of the claimed invention, a reference anticipates a claim if it discloses the claimed invention "such that a skilled artisan could take its teachings in combination with his own knowledge of the particular art and be in possession of the invention." In re Graves, 69 F.3d 1147, 1152, 36 USPQ2d 1697, 1701 (Fed. Cir. 1995), quoting from In re LeGrice, 301 F.2d 929, 936, 133 USPQ 365, 372 (CCPA 1962).

In our view, the disclosure in Fellous (column 6, lines 23-25) describing sensor information relating to height and orientation of the camera in relation to its pedestal is clearly position information as claimed. Similarly, although Fellous does not use

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the term "attitude", in our view, the skilled artisan would appreciate that sensor 29 which provides information as to tilt or inclination of the camera about its horizontal axis is an attitude measurement apparatus. In this same vein, the dolly sensor 30 in Fellous which measures displacement of the camera pedestal carriage 5 along the rails 6 would thereby provide an indication of distance or "range" to a viewed object, as also would the focusing sensor 31 described at column 5, line 67. Accordingly, since all of the claim limitations are present in the disclosure of Fellous, the Examiner's 35 U.S.C. § 102(e) rejection of independent claim 1 is sustained.

We next consider the Examiner's 35 U.S.C. § 103 rejection of claim 1 based on Pryor. According to the Examiner, while the main use of the imaging system disclosed in Pryor is in fixture construction, the Examiner nevertheless suggests the obviousness to the skilled artisan of using Pryor's system in computer modeling of car and building designs "... to create a more accurate computer model of any objects with respect to perspective and spatial relationships as measured on real-time." (Answer, page 4).

In response, Appellants argue (Brief, page 6) the Examiner's failure to establish a prima facie case of obviousness since there is no showing that all of the claim limitations are taught or

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suggested by Pryor. We are in agreement with Appellants that, at most, Pryor provides a teaching of running CAD software on a computer which is part of a combination including camera imaging apparatus. Further, although Pryor suggests the use of positional reference information from the CAD software, we find no teaching or suggestion of "... combining imagery from said electronic camera with imagery from said CAD software" as specifically recited in appealed claim 1.

In view of the above discussion, since all of the claim limitations are not taught or suggested by the applied prior art Pryor reference, it is our opinion that the Examiner has not established a prima facie case of obviousness with respect to independent claim 1. Accordingly, the Examiner's 35 U.S.C. § 103 rejection of independent claim 1 based on Pryor is not sustained.

Turning to a consideration of the Examiner's 35 U.S.C. § 103 rejection of claims 2-4 based on the combination of Fellous and Saunders, we do not sustain this rejection as well. In analyzing the limitations set forth in appealed claims 2-4, the Examiner has added Saunders to Fellous to address the claimed features directed to the determination of a reference point as related to the intersection of an image axis, which defines a system pointing direction, and the image plane of a camera.

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In response, Appellants contend (Brief, page 7) that the Examiner has not set forth a prima facie case of obviousness since, at most, the Examiner's analysis merely shows that some of Appellants' claimed elements appear in Fellous while others may appear in Saunders. After careful review of the Fellous and Saunders references in light of the arguments of record, we are in general agreement with Appellants' position as stated in the Brief. In our view, the Examiner has combined the projection plane and range finder teachings of Saunders with the computer modeling system of Fellous in some vague manner without specifically describing how the teachings would be combined. This does not persuade us that one of ordinary skill in the art having the references before her or him, and using her or his own knowledge of the art, would have been put in possession of the claimed subject matter.

We note that at page 6 of the Answer, the Examiner suggests that the skilled artisan would have been motivated and found it obvious to use a projection plane and range finding device such as taught by Saunders when combining a real and synthetic image "... because it would allow the perspective of background scenery to be maintained." There is no indication from the Examiner, however, as to where in the computer modeling system of Fellous such a device

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would be placed, let alone how any such modification would address the specifics of the claim language of claims 2-4 which requires a specific relationship among the imaging axis and imaging plane of the electronic camera and a defined reference point. In order for us to sustain the Examiner's rejection under 35 U.S.C. § 103, we would need to resort to speculation or unfounded assumptions or rationales to supply deficiencies in the factual basis of the rejection before us. In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968), rehearing denied, 390 U.S. 1000 (1968). Accordingly, since the Examiner has not established a prima facie case of obviousness, the 35 U.S.C. § 103 rejection of claims 2-4 based on the combination of Fellous and Saunders cannot be sustained.

In summary, we have sustained the Examiner's 35 U.S.C. § 102(e) rejection of claim 1 based on Fellous. As to the rejections under 35 U.S.C. § 103, we have not sustained the rejection of claim 1 based on Pryor, nor the rejection of claims 2-4 based on the combination of Fellous and Saunders. Therefore, the Examiner's decision rejecting claims 1-4 is affirmed-in-part.

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No time period for taking any subsequent action in connection with this appeal may be extended under 37 CFR § 1.136(a).

AFFIRMED-IN-PART

JAMES D. THOMAS)	
Administrative Patent Judge)	
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)	BOARD OF PATENT
JOSEPH F. RUGGIERO)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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)	
)	
HOWARD B. BLANKENSHIP)	
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JUDGE RUGGIERO

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APJ RUGGIERO

APJ BLANKENSHIP

APJ THOMAS

DECISION: **AFFIRMED-IN-PART**

PREPARED: Jun 27, 2003

OB/HD

PALM

ACTS 2

DISK (FOIA)

REPORT

BOOK