The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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. 33

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte ERHAN H. GUNDAY, MICHAEL DOLITON,
PAUL FOUNG and JOHN R. LEE

Appeal No. 2000-2208
Application No. 08/874,287[1]

ON BRIEF[2]

Before THOMAS, LEVY, and SAADAT, Administrative Patent Judges.
SAADAT, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the Examiner's final rejection of claims 35-37, 42 and 44, which are all of the claims pending in the present application.

We reverse.

[1] Application for patent filed June 13, 1997, which is a continuation of Application No. 08/465,446, filed June 5, 1995, now abandoned, which is a divisional of Application No. 08/066,969, filed May 24, 1993, now U.S. Patent 5,469,209, which is a divisional of Application No. 07/731,079, filed July 16, 1991, now U.S. Patent 5,249,056.

[2] The oral Hearing set for May 7, 2002 was waived by Appellants in a communication, received by facsimile, on March 21, 2002.

BACKGROUND

Appellants' invention is directed to an apparatus for overlaying user-locatable cursor marks on an image in order to accurately locate points of interest and provide a measurement of the physical distance between them. A calibration processor automatically calibrates the system using a known distance between the two points identified by the cursors and compensates for the unequal physical distance between pixels in vertical and horizontal directions.

Representative independent claim 35 is reproduced below:

> 35. Apparatus for generating video signals composed of a plurality of pixels representing a photographic image previously recorded in a frame on a photographic film-type medium, comprising:
>
> an image pickup device for producing video signals in response to a light image of said photographic image projected thereto;
>
> a storage device for storing a video frame interval of said video signals;
>
> a cursor generating device for selectively generating at least two cursor indicia at two cursor positions on said video frame;
>
> a modifying device coupled to said storage device and to said cursor generating device for modifying said video signals in said video frame interval read from said storage device such that pixels located at said cursor positions are replaced with said at least two cursor indicia, respectively, thereby generating a video image of said

photographic image with at least two cursor overlays superimposed thereon;

a measuring device for measuring the distance between two locations in the video image at which said at least two cursor overlays are superimposed; and

a calibrating device for selectively calibrating either vertical or horizontal distance between said two locations in the video image at which said at least two cursor overlays are superimposed to generate a calibrated distance between said two locations; wherein said calibrating device automatically compensates for unequal physical distance between pixels in the vertical and horizontal direction to permit said measuring device to determine the distance in uncalibrated orientation as a function of said calibrated distance.

The Examiner relies on the following references in rejecting the claims:

Schumacher	4,315,282	Feb. 9, 1982
Nonami et al. (Nonami)	4,935,810	Jun. 19, 1990

Claims 35-37, 42 and 44 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Nonami in view of Schumacher.

Rather than reiterate the viewpoints of the Examiner and Appellants regarding the above-noted rejection, we make reference to the answer (Paper No. 26, mailed June 6, 2000) for the Examiner's reasoning, the appeal brief (Paper No. 25, filed April 18, 2000) and the reply brief (Paper No. 28, filed August 1, 2000) for Appellants' arguments thereagainst.

OPINION

At the outset, we note that Appellants state their intention that claims 35-37, 42 and 44 be grouped together so that they stand and fall together (brief, page 5). Accordingly, we will consider the claims as one group and will limit our consideration to independent claim 35 as the representative claim of the group.

The Examiner relies on Nonami for teaching the claimed elements except for the input image being a projected photographic image and the calibration system. The Examiner, however, takes official notice that image sensors may be used in various environments and therefore, the sensors of Nonami are capable of receiving photographic images (answer, page 4). The Examiner further relies on Schumacher for disclosing a system for measuring the distance between two cursor overlays which "is calibrated by using a known distance" and presumes that the known distance is inputted by the user (id.).

Appellants argue that the Examiner, in taking the official notice, improperly associates the claimed image pickup device that receives photographic images with the photo sensors of Nonami (brief, page 7). Appellants further assert that Schumacher's calibration is based on calculating a distance by determining the number of pixels in the display area by counting

the number of cells over the displayed distance and does not teach or suggest compensating for the unequal distance between pixels in the vertical and horizontal directions (brief, page 8). Additionally, Appellants point to the display area aspect ratio of Schumacher and argue that such ratio relates only to determining the number of pixels in the display area, not to the physical distance between pixels or their differences in the vertical and horizontal directions (reply brief, pages 2 & 3).

In response to Appellants' arguments, the Examiner characterizes Schumacher's display arrangement of 192 lines each divided into 256 pixels as the claimed "unequal physical distance" between the pixels (answer, page 6). The Examiner further asserts that "[t]herefore, the shape of each cell is clearly rectangular with an aspect ratio of 192/256 or (3:4)" and concludes that by using a per-cell average distance, Schumacher discloses "distances between pixels" (answer, pages 6 & 7).

In rejecting claims under 35 U.S.C. § 103, the Examiner bears the initial burden of presenting a prima facie case of obviousness. See In re Rijckaert, 9 F.3d 1531, 1532, 28 USPQ2d 1955, 1956 (Fed. Cir. 1993). To reach a conclusion of obviousness under § 103, the examiner must produce a factual basis supported by teaching in a prior art reference or shown to

be common knowledge of unquestionable demonstration. Our reviewing court requires this evidence in order to establish a prima facie case. In re Piasecki, 745 F.2d 1468, 1471-72, 223 USPQ 785, 787-88 (Fed. Cir. 1984). The Examiner must not only identify the elements in the prior art, but also show "some objective teaching in the prior art or that knowledge generally available to one of ordinary skill in the art would lead the individual to combine the relevant teachings of the references." In re Fine, 837 F.2d 1071, 1074, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988).

A review of the applied prior art confirms that Nonami relates to a three-dimensional image measuring apparatus that uses the cursor position information for measuring the distance between the points designated by the cursors (col. 2, lines 13-29). However, as contended by the Examiner, the claimed image pickup device responsive to a projected photographic image and the calibration system are absent in Nonami. Schumacher, on the other hand, discloses a system for analysis and measurement of displayed images. More specifically, Schumacher employs cursor controls for positioning cursors for indicating the area and distances to be calibrated or measured (col. 3, lines 33-37). Schumacher refers to calibration of the cell size by "using known

distance or area information, and a computation of cell count versus that known area or distance" where a per-cell average distance or area constant is used in the calculations (col. 4, lines 31-42). Furthermore, to define the digital bit plane overlay of a valid area by address or cell location, Schumacher divides each of the 192 horizontal lines in the display area into 256 segments or picture elements, resulting in a 3:4 aspect ratio (col. 6, lines 4-16).

Initially, we note that the examiner may take official notice of facts outside of the record which are capable of instant and unquestionable demonstration as being "well-known" in the art. In re Ahlert, 424 F.2d 1088, 1091, 165 USPQ 418, 420 (CCPA 1970). However, we do not find any disclosure in Nonami that teaches or suggests using the image sensors necessarily as the claimed image pickup device that receives a projected photographic image. In that regard, Nonami merely discloses using solid state imaging devices such as CCD sensors 23 and 24 in an endoscope for receiving the image of an illuminated object (Fig. 2 and col. 4, lines 14-29). Thus, although we agree with the Examiner's taking of official notice that such sensors are common and may be used in various imaging devices, we do not find the specifically claimed image pickup device that receives a

projected photographic image to be a fact "capable of instant and unquestionable demonstration as being 'well-known' in the art."

Turning now to Schumacher, we find that the reference defines the aspect ratio of the display area and not that of the individual pixels as argued by the Examiner (answer, page 6). There is, in fact, nothing in Schumacher that directs us to the shape of each cell as being rectangular with an aspect ratio of 3:4, nor any disclosure related to unequal distances between pixels in the vertical and horizontal directions. In our view, the Examiner's conclusion that the 256 pixels in each of the 192 lines in the display area corresponds to the claimed "automatically compensates for unequal physical distance between pixels in the vertical and horizontal direction", is based on unwarranted conjecture and speculation that are not supported by any disclosure in prior art. In order for us to agree with the Examiner's position, we would need to improperly resort to speculation or unfounded assumptions to supply deficiencies in the factual basis of the rejection. In re Warner, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), cert. denied, 389 U.S. 1057 (1968), reh'g denied, 390 U.S. 1000 (1968).

We agree with Appellant's assertion (brief, page 8) that the combination of Nonami and Schumacher fails to teach or

suggest compensating for the unequal physical distance between pixels in the vertical and horizontal directions. As discussed above, Schumacher does not recognize the unequal physical distance between pixels in vertical and horizontal directions. Thus, assuming, arguendo, that it would have been obvious to combine Nonami with Schumacher, as held by the Examiner, the combination would still fall short of teaching the claimed automatic compensation for the unequal distance between pixels. Therefore, contrary to the Examiner's position, automatically compensating for such unequal distances to permit the measuring device "to determine the distance in uncalibrated orientation as a function of said calibrated distance", as recited in claim 35, cannot be derived from the combination of the references.

In view of our analysis above, we find that the Examiner has failed to set forth a prima facie case of obviousness with respect to claim 35 because the necessary teachings and suggestions related to the claimed image pickup device and the calibrating device are not shown. Accordingly, we do not sustain the 35 U.S.C. § 103 rejection of independent claim 35, nor of claims 36, 37, 42 and 44 dependent thereon.

CONCLUSION

In view of the foregoing, the decision of the Examiner rejecting claims 35-37, 42 and 44 under 35 U.S.C. § 103 is reversed.

REVERSED

JAMES D. THOMAS Administrative Patent Judge	)	
STUART S. LEVY Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
MAHSHID D. SAADAT Administrative Patent Judge	)	

MDS/ki

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