

The opinion in support of the decision being entered today was not written for publication and is not binding precedent of the Board.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 FRANK Z. BRILL and BRUCE E. FLINCHBAUGH

Appeal No. 2003-1545
Application 09/292,499

ON BRIEF

Before KRASS, JERRY SMITH and BARRETT, Administrative Patent Judges.

KRASS, Administrative Patent Judge.

DECISION ON APPEAL

This is a decision on appeal from the final rejection of claims 1-4, 6, 7 and 13-23. Claims 9-12 and 24 have been allowed by the examiner and claims 5 and 8 have been cancelled.

The invention is directed to a monitoring system for mapping the physical position of an object from a video image to a map of a monitored area.

Representative independent claim 1 is reproduced as follows:

1. A method of monitoring, comprising the steps of:

providing a map of a monitored area;

detecting a reference image of the monitored area;

receiving operator input identifying a first region which corresponds to a selected portion of the monitored area as viewed in the reference image;

receiving operator input identifying a second region which corresponds to the selected portion as viewed on the map;

defining warp transformation parameters for translating a selected point in the first region into a corresponding point in the second region;

detecting a further image of the area;

identifying a portion of the further image corresponding to an object of interest;

selecting a first point near a lower end of the portion of the further image which corresponds to the object of interest, the first point being within the first region; and

carrying out a warp transformation of the first point from the first region to the second region according to the defined warp transform parameters in order to identify within the second region a second point which corresponds to the first point and which identifies a position on the map of the object of interest.

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The examiner relies on the following references:

Irani et al. (Irani)	5,768,447	Jun. 16, 1998 (filed Jun. 14, 1996)
Gu et al. (Gu)	6,097,853	Aug. 1, 2000 (filed Aug. 18, 1997)
Wixson et al. (Wixson)	6,396,961	May 28, 2002 (eff. filing date Nov. 12, 1997)

Claims 1-4, 6, 7 and 13-23 stand rejected under 35 U.S.C. § 103. As evidence of obviousness, the examiner offers Irani and Wixson with regard to claims 1-4, 6, 7 and 13-16, adding Gu with regard to claims 17-23.

Reference is made to the briefs and answer for the respective positions of appellants and the examiner.

OPINION

With regard to claim 1, it is the examiner's position that Irani teaches the claimed subject matter but for a disclosure of receiving operator input between two regions and defining warp transformation parameters.

The examiner turns to Wixson (Figures 2, 3 and column 6, lines 64+) for a teaching of operator interaction. The examiner notes that warp transformation parameters are defined at column 4, line 27 through column 7, where a selected area is transformed to the same selected area in another frame. The examiner

specifically notes column 5, line 47, and column 6, line 17.

The examiner concludes that it would have been obvious to modify the system of Irani with that taught by Wixson "for the purpose of operator interaction with the system. Because Irani col. 1, line 52-54 teaches that well-known alignment system (like Wixson) be incorporated into the system" (sic, answer-page 4).

Appellants argue that the examiner has confused two very important aspects of the invention, the first being "defining warp transformation parameters" for a warp transformation between the map and the reference image and the further image; and the second being the use of the warp transformation in transforming a first point in the reference image to a second point in the map, according to the defined warp transformation parameters.

Appellants argue, inter alia, that while Irani's system provides a portion of a reference model that includes a position within a video sequence, indicating the use of warp transform parameters for a warp transformation of a user-selected point or region, this is not the specification of a region within the reference image used to define the warp transform parameters, as claimed.

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Appellants also argue that while Irani specifies a type of user input device, he does not suggest the user input to identify a region within the reference image as recited in claims 1 and 13. Thus, argues appellants, Irani does not show or suggest "receiving operator input identifying a first region which corresponds to a selected portion of the monitored area as viewed in the reference image" (claim 1) or "permit an operator to define a first region via the operator input/output section which corresponds to a selected portion of the area as viewed in the reference image" (claim 13).

Further, appellants point out that Irani does not suggest the identification of a second region as recited in claims 1 and 13.

Moreover, appellants argue that Wixson does not remedy the deficiencies of Irani because Wixson discloses operator input to specify a new target point of a camera but this does not "make obvious identification of two regions within respective reference image and map as recited in claims 1 and 13" (principal brief-page 9).

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We agree with appellants and will not sustain the rejection of claims 1-4, 6, 7 and 13-23 under 35 U.S.C. §103.

The claims require two operator input operations (identifying first and second regions, corresponding, respectively, to a selected portion of a monitored area as viewed in the reference image, and to the selected portion as viewed on the map) with warp transformation parameters being defined for translating a selected point in the first region into a corresponding point in the second region. Then, inter alia, a first point near a lower end of the portion of a further image corresponding to an object of interest is selected, and a warp transformation of the first point from the first region to the second region according to the defined warp transform parameters is carried out.

As appellants point out (at page 12 of the principal brief), Irani recognizes the need for warp transform parameters but Irani fails to teach how the warp transform parameters are defined. Moreover, Irani teaches a requirement for information for aligning video frames, but does not suggest that operator identified corresponding regions is the way to achieve this alignment.

We also agree with appellants that Irani does not mention any object of interest nor of selecting a first point near the lower end of such an object of interest. This may be because Irani is interested in indexing image information rather than in monitoring an area for security purposes as in the instant invention. But, in any event, for whatever reason, Irani simply does not suggest this claim limitation.

Moreover, we do not find Wixson to supply any of the deficiencies of Irani. Merely because Wixson specifies a fixation point in a reference image does not suggest identifying a first and second region as recited in instant claims 1 and 13. Further, we find nothing in Wixson that indicates that warp transformation parameters are formed between two operator specified regions as in the instant claims. In other words, while Wixson may, at best, indicate that there needs to be some definition of warp transformation parameters, it clearly does not suggest the specific steps of the instant claims wherein an operator identifies a first region which corresponds to a selected portion of the monitored area as viewed in the reference image, an operator identifies a second region which corresponds to the selected portion as viewed on the map, and warp transformation parameters are defined for translating a selected

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point in the first region into a corresponding point in the second region.

Thus, while the combination of Irani and Wixson may recognize the need for warp transformation parameters, the combination fails to teach how such warp transformation parameters are defined, whereas, in the instant claimed invention, the definition of the warp transformation parameters comes from the operator identified first and second regions. While Irani may teach an alignment of video frames and that information is necessary for such alignment, Irani does not suggest that operator identified corresponding regions are used in the alignment. Accordingly, the combination of Irani and Wixson does not suggest the instant claimed subject matter.

We also do not find the reference to Gu helpful, with regard to claims 17-23, in supplying the deficiencies of the primary references.

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For at least these reasons, we will not sustain the rejection of claims 1-4, 6, 7 and 13-23 under 35 U.S.C. § 103.

The examiner's decision is reversed.

REVERSED

ERROL A. KRASS)	
Administrative Patent Judge)	
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JERRY SMITH)	BOARD OF PATENT
Administrative Patent Judge)	APPEALS AND
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