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

UNITED STATES PATENT AND TRADEMARK OFFICE

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BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

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Ex parte JOHN HEY

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Appeal No. 2005-2766
Application No. 09/682,659

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ON BRIEF

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Before BARRETT, OWENS and NAPPI, *Administrative Patent Judges*

OWENS, *Administrative Patent Judge*.

DECISION ON APPEAL

This appeal is from a rejection of claims 14-19, 21-26, 41 and 42. Claims 1-13, 20, 27-40 and 43 have been canceled.

THE INVENTION

The appellant claims a stereoscopic image display structure and a system for viewing it. Claims 14 and 41 are illustrative:

14. A system for stereoscopic viewing of an image, comprising:

means for displaying upon a generally flat surface a conventional stereoscopic pair of images, proximate but separately from one another;

means for improving the stereoscopic match between the two images as viewed, by distorting at least one of the images; and

an optical device adapted to be placed in front of and proximate to a viewer's eyes, which device is worn by the viewer or held by the viewer as though worn, and comprising means for re-angling the optical axis for at least one eye, so that each eye generally targets the center of a respective one of the pair of images.

41. An image display structure for displaying upon a generally flat surface, comprising:

a conventional stereoscopic pair of images, the images proximate but separate from one another, wherein at least one image is deliberately distorted prior to display, to counteract distortion caused by the viewer’s perspective relative to the image.

THE REFERENCES

Craig	4,740,836	Apr. 26, 1988
Surati et al. (Surati)	6,456,339	Sep. 24, 2002 (filed Oct. 28, 1998)

THE REJECTION

Claims 14-19, 21-26, 41 and 42 stand rejected under 35 U.S.C. § 103 as being unpatentable over Craig in view of Surati.

OPINION

We reverse the aforementioned rejection.

The appellant's independent claims are claims 14, 41 and 42. Claim 14 requires means for improving the stereoscopic match between the two images in a conventional stereoscopic pair of images as viewed, by distorting at least one of the images. Claim 41 requires deliberately distorting at least one of the images in a conventional stereoscopic pair of images prior to display, to counteract distortion caused by the viewer's perspective relative to the image. Claim 42 requires deliberately distorting at least one of the images in a conventional stereoscopic pair of images prior to display, to counteract distortion caused by the viewer's perspective relative to the image.

Craig discloses a split screen video display divided by a horizontal line to produce upper and lower images of a stereoscopic pair (col. 2, lines 49-52). When a viewer looks straight at the display through two substantially identical optical wedges (refracting prisms), one eye sees the upper image and the other eye sees the lower image (col. 3, lines 48-53; col. 5, lines 21-39).

Surati derives a display map by selectively driving the display while sensing the display output (col. 6, lines 26-29). "A stored pixel correction function based on the display map is applied to pixel data corresponding to the images to be displayed, and the display is driven from the corrected or modified pixel data" (col. 6, lines 31-34). Surati preferably uses overlapping projection displays, and "[b]y tiling the screen with many such projection displays, each point on the entire screen surface is covered by one or more displays" (col. 8, lines 28-30). "No attempt is made to align the projectors, either mechanically or electrically, either in position, rotation, relative brightness, or relative hue" (col. 8, lines 31-33). Instead, Surati "relies on the application of large amounts of computation to perform the perfect 'alignment' of these display elements" (col. 8, lines 34-35). Surati's technique can be used "to correct for many types of distortion, including, but not limited to: imperfections across the display, misalignment of plural projectors in a common region; intensity variations across the display; keystone distortion; trapezoidal distortion; pin cushion distortion; barrel distortion; chromatic aberration; color mismatch; and lateral and rotational displacement" (col. 6, lines 38-45).

The examiner argues that "[i]t would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a means to deliberately distort at least one image prior to display as suggested by Surati et al. to the system of Craig to improve the performance of the display (column 9, lines 23-25)" (answer, page 5), and that "since Craig is a display system where an image at an off angle would be distorted, one of ordinary skill in the art would have been motivated to deliberately distort that image of Craig, as taught by Surati et al., to provide improved performance of the display by providing a better final image to the viewer" (answer, page 6). The examiner further argues that it is logical to apply Surati's technique to any image that is viewed or shown at an angle that is not perpendicular to the screen or display angle, including Craig's stereoscopic display, because the same problem of image distortion will occur (answer, page 6).

The test for obviousness of a proposed combination of references is not whether the proposed combination is logical but, rather, is whether the applied references would have fairly suggested the proposed combination to one of ordinary skill in the art. The examiner has not established that the applied

references themselves would have fairly suggested, to one of ordinary skill in the art, applying Surati's pixel correction function to a stereoscopic display to distort at least one of the stereoscopic display's images to improve the stereoscopic match between the images, counteract distortion caused by a viewer's perspective relative to a distorted image, or to counteract image mismatch caused by a viewing device. The examiner's argument that one of ordinary skill in the art would have been led by the applied references to do so because in either display an off angle image would be distorted (answer, page 6) is not supported by evidence. The examiner's mere speculation to that effect is not sufficient for establishing a prima facie case of obviousness. *See In re Warner*, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), *cert. denied*, 389 U.S. 1057 (1968); *In re Sporck*, 301 F.2d 686, 690, 133 USPQ 360, 364 (CCPA 1962).

Accordingly, we reverse the examiner's rejection.

DECISION

The rejection of claims 14-19, 21-26, 41 and 42 under 35 U.S.C. § 103 over Craig in view of Surati is reversed.

REVERSED

LEE E. BARRETT Administrative Patent Judge	)	
TERRY J. OWENS Administrative Patent Judge	)	BOARD OF PATENT APPEALS AND INTERFERENCES
ROBERT NAPPI Administrative Patent Judge	)	

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