

Appeal No. 96-3637
Application No. 08/248,123

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opinion in support of the decision being entered today (1) was not written for publication in a law journal and (2) is not binding precedent of the Board.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. 14

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte DANIEL M. DONAHUE
and DALE A. CONE

Appeal No. 96-3637
Application No. 08/248,123¹

ON BRIEF

Before URYNOWICZ, FLEMING, and HECKER, Administrative Patent Judges.

URYNOWICZ, Administrative Patent Judge.

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DECISION ON APPEAL

This appeal is from the final rejection of claims 1-15, all the claims pending in the application.

The invention pertains to a method and apparatus to display video images. Claim 1 is illustrative and reads as follows:

An apparatus to display video images for a user comprising:

circuitry for generating a sequence of frames of video signals from the video images from a prerecorded source of frames, said sequence of frames corresponding to different points of view of a scene;

circuitry for determining a first direction that said user is facing by a first directional signal indicative of said first direction that said user is facing;

circuitry for storing a first portion of said sequence of frames from said prerecorded source of said frames in accordance with said first direction that said user is facing in a first memory;

circuitry for determining a second direction that said user is facing by a second directional signal indicative of said second direction that said user had been facing;

circuitry for storing a second portion of said sequence of frames from said prerecorded source of said frames in accordance with said second directional signal indicative of said second direction that said user had been facing in a second memory;

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circuitry for reading, from said second memory, said stored second portion of said sequence of frames from said prerecorded source of frames in accordance with said second directional signal indicative of said second direction that said user had been facing; and

a display coupled to said second memory for displaying said stored second portion of said sequence of frames.

The references relied upon by the examiner as evidence of obviousness are:

Smith	4,985,762	Jan. 15, 1991
Lewis et al. (Lewis)	5,177,872	Jan. 12, 1993

Claims 1-5, 8-12 and 15 stand rejected under 35 U.S.C. ' 103 as being unpatentable over Smith.

Claims 6, 7, 13 and 14 stand rejected under 35 U.S.C.

' 103 as being unpatentable over Smith in view of Lewis.

The respective positions of the examiner and the appellants with regard to the propriety of these rejections are set forth in the final rejection (Paper No. 4) and the examiner=s answer (Paper No. 10) and the appellants= brief (Paper No. 9) and reply brief (Paper No. 12).

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Appellants= Invention

The invention provides a virtual reality environment using real images that have been recorded and are displayed, and concerns a method and apparatus for collecting, recording and displaying video information from real images that have been prerecorded. For example, images of a roller coaster ride, a balloon ride and a white water expedition can be prerecorded to provide a thrill seeking activity. The prerecorded images can be displayed in a headset having N display screens approximating, for example, 120 degrees of a field of view. Since the present invention simultaneously records video of the activity that includes a full 360 degrees, the user is not limited to merely sitting passively and viewing the prerecorded images. The user may interact with the presentation in that the user is able to view any object, which may be of interest. For example, while viewing prerecorded images, the user may notice off to one side of his field of vision an interesting object, and the user may choose to view this object more closely by viewing the object in the

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center of his field of vision. The user is able to turn his head; the prerecorded images change and this object is placed into the center of his field of vision, providing a realistic experience.

The Prior Art

Smith discloses a method and apparatus for recording of a panorama for display of a portion thereof on a video display device.

Figure 7 illustrates a projection 80 of a film record to produce an actual projection representation of a recorded panorama, which can be viewed on a cylindrical screen. This projected representation is then rerecorded using a rotating optical slit scanner for producing a film record 82 or a rotating optical slit scanner in combination with a CCD device 84. After the records have been produced and the necessary timing information reintroduced into the resulting series, the record can be accessed using conventional technology such as a high density T.V., VCR 86, or optical disc player, depending upon the type of format

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used, in combination with a frame buffer 90 and various control arrangements for selecting which portion of the actual record the viewer wishes to consider. Such variation can be imparted to the system by the joystick control 92, or the use of the video glasses 99 which are responsive to the head movement of the user.

Lewis discloses a helmet display device which comprises a flux gate compass as a position-orientation sensor for sensing the direction that the user is looking.

Opinion

We are of the opinion that the rejections should not be sustained.

The examiner recognizes that Smith discloses but one frame buffer (memory) for storing a sequence of frames, and

admits that Smith does not teach circuitry for storing a second portion of a sequence of frames in a second memory.

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With respect to Smith, the position taken by the examiner is that it would have been obvious to use more than one frame buffer 90 for storing different parts of the prerecording image, such that the speed for retrieving the image would be faster.

Although the examiner may be correct that two buffers or memories could be used to speed up image retrieval in Smith, there is no evidence relied on by the examiner which establishes that the use of two buffers or memories to speed up image retrieval, or any other kind of information retrieval, was known in the prior art at the time the invention was made. The examiner has not provided an adequate factual basis to support an obviousness conclusion. In re Warner, 379 F.2d 1011, 1016, 154 USPQ 173, 178 (CCPA 1967). The mere fact that the prior art can 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, 23 USPQ2d 1780, 1783-84 (Fed. Cir. 1984).

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Whereas storing a second portion of a sequence of frames or lines in a second memory is required by all of the claims, the rejections will not be sustained.

REVERSED

STANLEY M. URYNOWICZ, JR.)	
Administrative Patent Judge)	
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)	
)	BOARD OF PATENT
MICHAEL R. FLEMING)	APPEALS
Administrative Patent Judge)	AND
)	INTERFERENCES
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STUART N. HECKER)	
Administrative Patent Judge)	

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