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Martin et al.

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(54) **CRITICAL ALIGNMENT OF PARALLAX IMAGES FOR AUTOSTEREOSCOPIC DISPLAY**

(52) **U.S. Cl.** **348/42; 382/154; 345/419**

(58) **Field of Classification Search** **348/42; 382/154; 345/419**

See application file for complete search history.

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(56) **References Cited**

U.S. PATENT DOCUMENTS

4,006,291	A	2/1977	Imsand	
4,303,316	A	12/1981	McElveen	
4,429,328	A	1/1984	Jones et al.	
4,815,819	A	3/1989	Mayhew et al.	
5,510,831	A	4/1996	Mayhew	
5,991,551	A *	11/1999	Bacs et al.	396/324
6,191,809	B1	2/2001	Hori et al.	
6,760,020	B1 *	7/2004	Uchiyama et al.	345/419
2001/0045979	A1 *	11/2001	Matsumoto et al.	348/43
2003/0152264	A1 *	8/2003	Perkins	382/154
2004/0090445	A1 *	5/2004	Iizuka et al.	345/679

FOREIGN PATENT DOCUMENTS

EP 0 735 512 A2 10/1996

* cited by examiner

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(57) **ABSTRACT**

A method is provided for generating an autostereoscopic display. The method includes acquiring a first parallax image and at least one other parallax image. At least a portion of the first parallax image may be aligned with a corresponding portion of the at least one other parallax image. Alternating views of the first parallax image and the at least one other parallax image may be displayed.

28 Claims, 4 Drawing Sheets

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§ 371 (c)(1),
(2), (4) Date: **May 20, 2005**

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PCT Pub. Date: **Jun. 10, 2004**

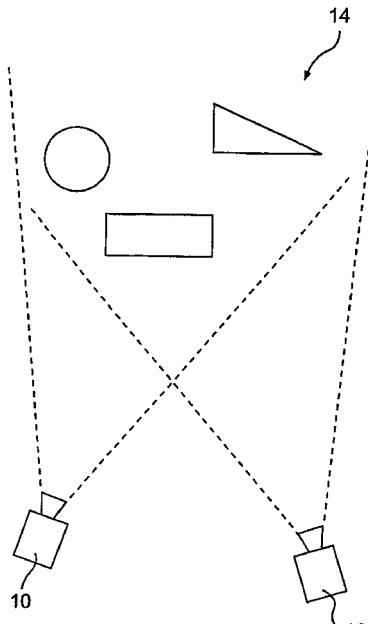
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(51) **Int. Cl.**
H04N 13/00 (2006.01)



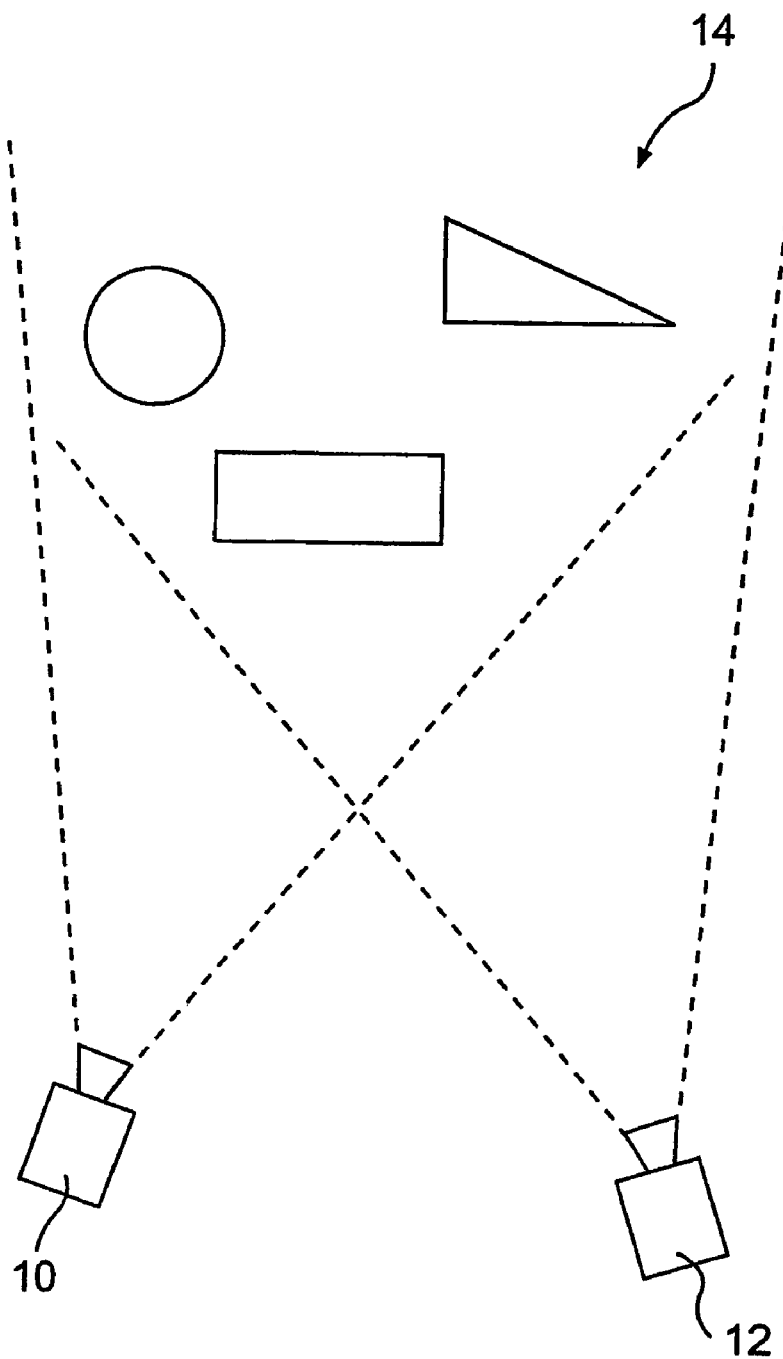


FIG. 1

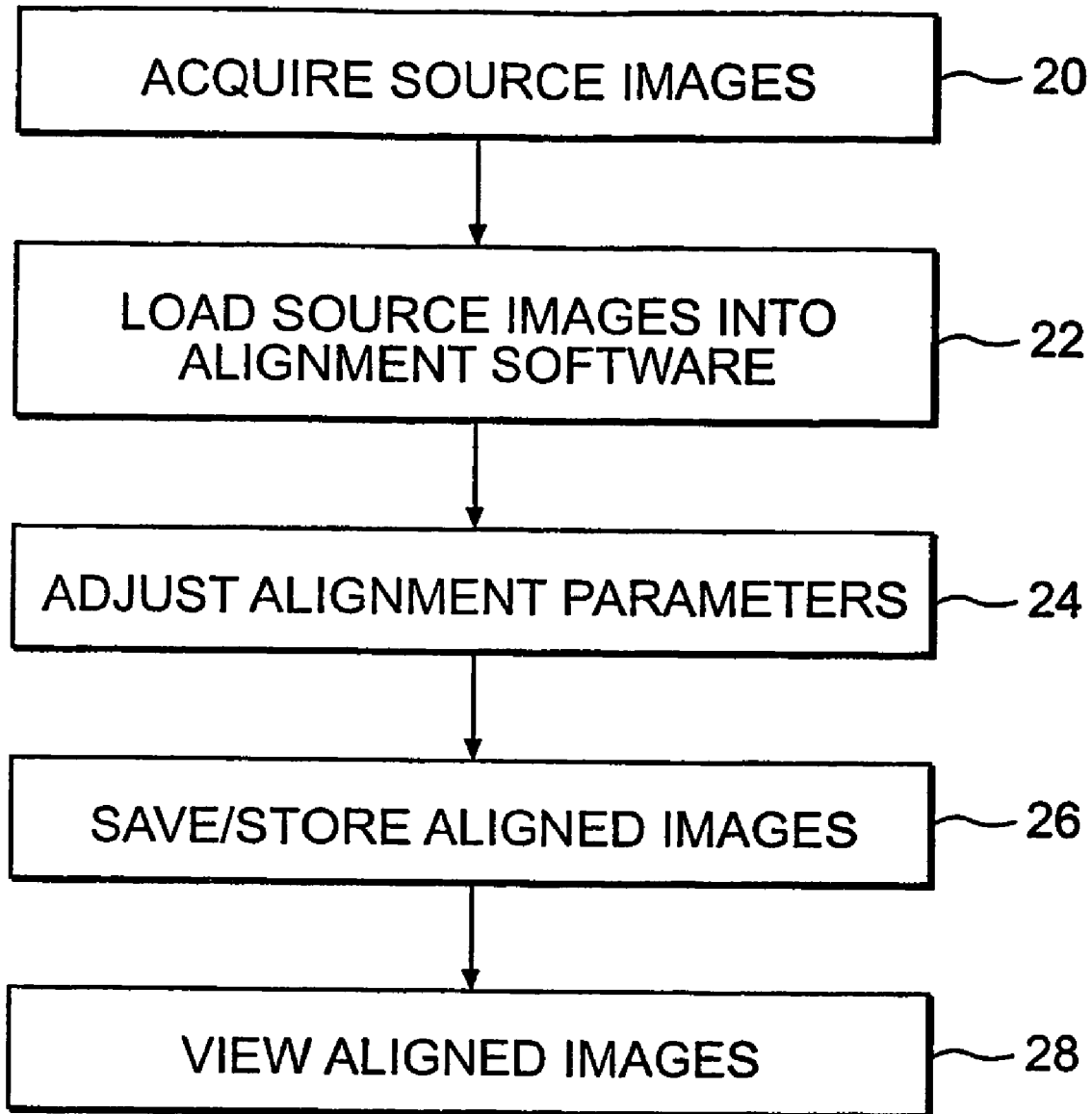
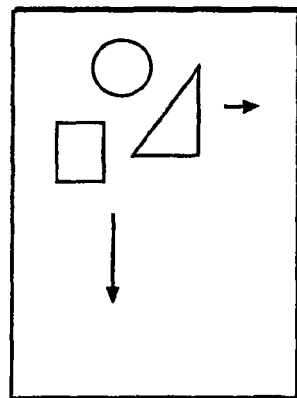
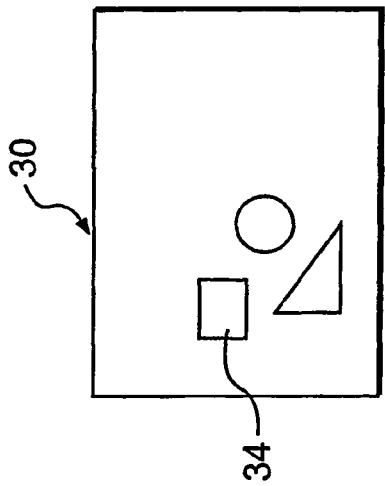
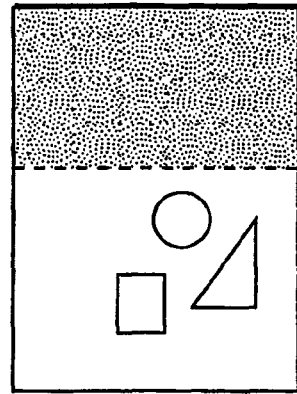
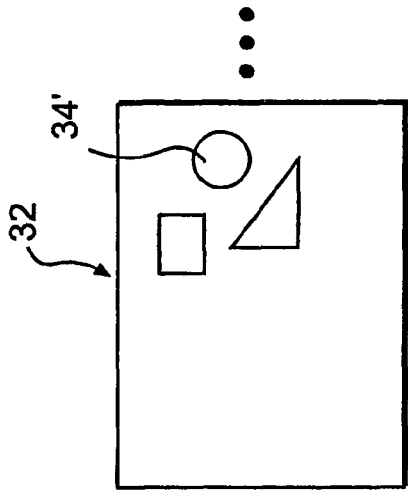


FIG. 2



A B C D E F

ALIGNED IMAGES (THREE R-L PAIRS)

FIG. 4a

A B C D E F A B C D E F ...

SEQUENTIAL PLAYBACK PATTERN

FIG. 4b

A D E B C F A B C F E D ...

RANDOM PLAYBACK PATTERN

FIG. 4c

C F A B E D B A D E F C ...

ANOTHER RANDOM PLAYBACK PATTERN

FIG. 4d

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