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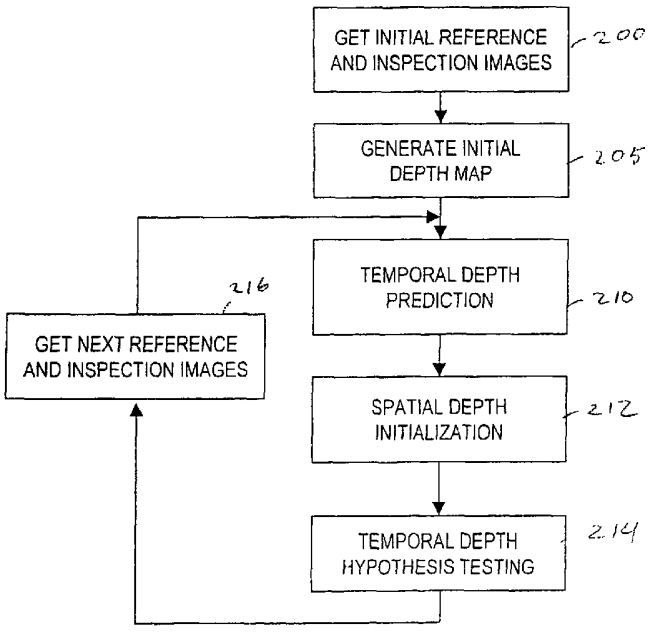
For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: DYNAMIC DEPTH RECOVERY FROM MULTIPLE SYNCHRONIZED VIDEO STREAMS



(57) Abstract: A method of generating a dynamic depth map for a sequence of images from multiple cameras models a scene as a collection of 3D piecewise planar surface patches induced by color based image segmentation. This representation is continuously estimated using an incremental formulation in which the 3D geometric, motion, and global visibility constraints are enforced over space and time. The proposed algorithm optimizes a cost function that incorporates the spatial color consistency constraint and a smooth scene motion model.

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INTERNATIONAL SEARCH REPORT

International application No.

PCT/US03/39254

A. CLASSIFICATION OF SUBJECT MATTER

IPC(7) : GO6K 9/00

US CL : 382/106

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

U.S. : 382/106, 107, 154, 171, 172, 173; 356/3, 12; 345/419, 426, 427; 348/42, 47

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

IEEE DATABASE

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6,430,304 B2 (HANNA et al) 06 August 2002	1-6
A	US 6,490,364 B2 (HANNA et al) 03 December 2002, whole document	1-6
A	US 6,046,763 (ROY) 04 April 2000, figure 13, col. 3	1-6
A	US 5,109,425 (LAWTON) 28 April 1992, figure 5	1-6
A	US 6,664,962 B1 (KOMSTHOEFT et al) 16 December 2003; figure 13A, 13B	1-6
A	TAO HAI et al., Object tracking with bayesian estimation of dynamic layer representations, IEEE Computer Society 2002, whole document	1-6
A	ZHANG LI, et al., Spacetime Stereo: Shape recovery for dynamic scenes, IEEE 2003, section 3	1-6
A	TAO HAI, et al., Dynamic layer representaion with applicaiton to tracking, IEEE 2000, whole document	1-6

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☐ See patent family annex.

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