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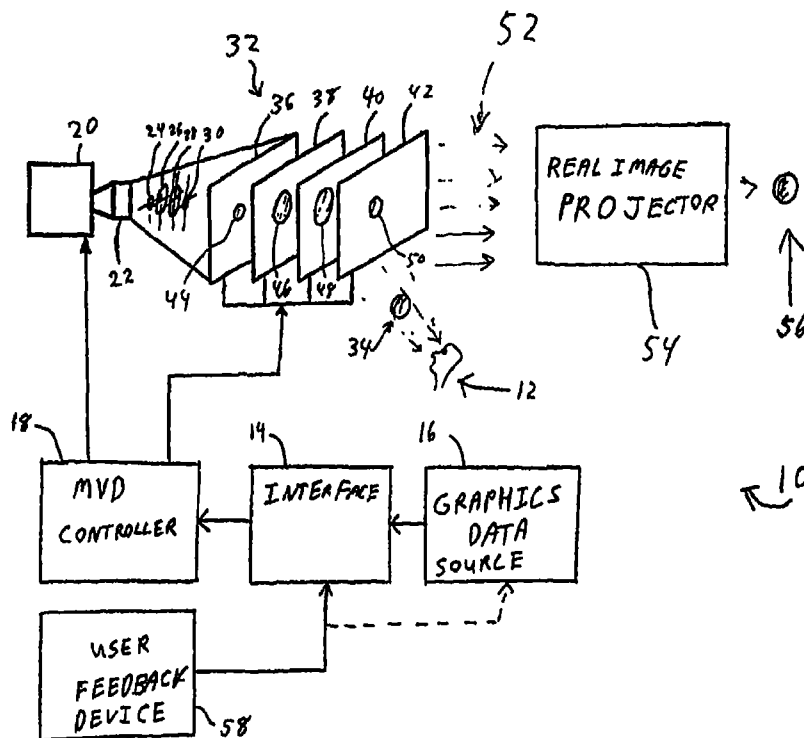
INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶ : G06T 15/00		A1	(11) International Publication Number: WO 99/54849
			(43) International Publication Date: 28 October 1999 (28.10.99)
(21) International Application Number: PCT/US99/08618		(81) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MD, MG, MK, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, UA, UG, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).	
(22) International Filing Date: 20 April 1999 (20.04.99)			
(30) Priority Data: 60/082,442 20 April 1998 (20.04.98) US 09/196,553 20 November 1998 (20.11.98) US 09/291,315 14 April 1999 (14.04.99) US			
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(54) Title: MULTI-PLANAR VOLUMETRIC DISPLAY SYSTEM AND METHOD OF OPERATION USSING THREE-DIMENSIONAL ANTI-ALIASING

(57) Abstract

A multi-planar volumetric display system (10) and method of operation generate volumetric three-dimensional images (34 and 56) using a multi-surface optical device (32) including a plurality of individual optical elements (36, 38, 40 and 42) ranged in an array; an image projector (20) for selectively projecting images on respective optical elements (36, 38, 40 and 42) to generate a first volumetric three-dimensional image (34) viewable in the multi-surface optical device (32); and a floating-image generator (54) for projecting the first volumetric three-dimensional image (34) to generate a second volumetric three-dimensional image (56) viewable as floating in space at a location separate from the multi-surface optical device (32). Anti-aliasing adjusts the display of voxels (24, 26, 28 and 30) in a transition between optical elements (36, 38, 40 and 42), such that color values of the voxels (24, 26, 28 and 30) are modified as a function of the distance of the voxels (24, 26, 28 and 30) from the optical elements (36, 38, 40 and 42), to generate a smooth transition between portions of the volumetric three-dimensional image (44, 46, 48 and 50).



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