



9905459-5
IP08 copy

INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification 6 : G03H 1/02	A1	(11) International Publication Number: WO 98/57234 (43) International Publication Date: 17 December 1998 (17.12.98)
(21) International Application Number: PCT/US98/11947 (22) International Filing Date: 9 June 1998 (09.06.98) (30) Priority Data: 08/873,252 11 June 1997 (11.06.97) US (63) Related by Continuation (CON) or Continuation-in-Part (CIP) to Earlier Application US 08/873,252 (CIP) Filed on 11 June 1997 (11.06.97) (71) Applicant (for all designated States except US): LOCKHEED MARTIN ENERGY RESEARCH CORP. [US/US]; 701 Scarborough Road, Oak Ridge, TN 37831 (US). (72) Inventors; and (75) Inventors/Applicants (for US only): THOMAS, Clarence, E. [US/US]; 3601 Bluff Point Drive, Knoxville, TN 37922 (US). BAYLOR, Larry, R. [US/US]; 616 Lark Meadow Drive, Knoxville, TN 37922 (US). HANSON, Gregory, R. [US/US]; 624 Offutt Road, Clinton, TN 37716 (US). RASMUSSEN, David, A. [US/US]; 415 Dixieview Drive, Knoxville, TN 37922 (US). VOELKL, Edgar [DE/US]; 14 Windhaven Lane, Oak Ridge, TN 37830 (US). CASTRA-	CANE, James [US/US]; 852 Myrtle Avenue, Albany, NY 12208 (US). SIMKULET, Michelle [US/US]; 25B Johnson Road, Latham, NY 12110 (US). CLOW, Lawrence [US/US]; 30 Mountain View Drive, Waterford, NY 12188 (US). (74) Agent: BRUCKNER, John, J.; Wilson Sonsini Goodrich & Rosati, 550 Page Mill Road, Palo Alto, CA 94304-1050 (US). (31) Designated States: AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CU, CZ, DE, DK, EE, ES, FI, GB, GE, GH, GM, GW, HU, ID, IL, IS, JP, KE, KG, KP, KR, KZ, 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, US, UZ, VN, YU, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, 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, ML, MR, NE, SN, TD, TG). Published With international search report.	
(54) Title: DIRECT-TO-DIGITAL HOLOGRAPHY, HOLOGRAPHIC INTERFEROMETRY, AND HOLOVISION		
(57) Abstract Systems and methods for direct-to-digital holography are described. An apparatus includes a laser (210); a beamsplitter (240) optically coupled to the laser; a reference beam mirror (290) optically coupled to the beamsplitter; an object (250) optically coupled to the beamsplitter; a focusing lens (270) optically coupled to both the reference beam mirror and the object; and a digital recorder optically coupled to the focusing lens. A reference beam is incident upon the reference beam mirror at a non-normal angle, and the reference beam and an object beam are focused by the focusing lens at a focal plane of the digital recorder to form an image. The systems and methods provide advantages in that computer assisted holographic measurements can be made.		