



INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(51) International Patent Classification ⁶: G06G 7/00, G06E 1/04	A1	(11) International Publication Number: WO 96/18965 (43) International Publication Date: 20 June 1996 (20.06.96)
(21) International Application Number: PCT/US95/16456 (22) International Filing Date: 14 December 1995 (14.12.95) (30) Priority Data: 08/357,460 16 December 1994 (16.12.94) US 08/454,070 30 May 1995 (30.05.95) US 08/532,329 19 September 1995 (19.09.95) US (71)(72) Applicant and Inventor: HAIT, John, N. [US/US]; P.O. Box 4694, Missoula, MT 59806 (US).		(81) Designated States: AM, AT, AU, BB, BG, BR, BY, CA, CH, CN, CZ, DE, DK, EE, ES, FI, GB, GE, HU, IS, JP, KE, KG, KP, KR, KZ, LK, LR, LT, LU, LV, MD, MG, MN, MW, MX, NO, NZ, PL, PT, RO, RU, SD, SE, SG, SI, SK, TJ, TM, TT, UA, UG, UZ, VN, European patent (AT, BE, CH, DE, DK, ES, 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), ARIPO patent (KE, LS, MW, SD, SZ, UG). Published <i>With international search report. Before the expiration of the time limit for amending the claims and to be republished in the event of the receipt of amendments.</i>

(54) Title: PATTERN-RECOGNITION COMPUTING AND METHOD FOR PRODUCING SAME**(57) Abstract**

Pattern-recognition computing can be accomplished using wave-type or other types of energy. In pattern-recognition computing which uses a plurality of wave-type energy input patterns modulated with quantized information (10, 11, 12, 13), energy from the patterns combines to produce interference-based dynamic images (31, 31A). Component parts of a dynamic image are separated and recombined to produce logic and other computing process outputs (28, 29). To produce a coordinated set of optics for pattern-recognition computing, waveforms at pixel-sized image

components of the dynamic image are chosen to become contributors to the combined output if they will contribute (or can be modified to contribute) in a positive manner to a combined output waveform that obeys the logic rules of the device being produced. Iterative changes in input pattern characteristics are used to optimize the coordinated optics. Pattern-recognition computing can also use special interference and frequency-multiplexed logic.

