

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
24 July 2003 (24.07.2003)

PCT

(10) International Publication Number
WO 03/060870 A1

(51) International Patent Classification⁷: **G09G 3/36**,
3/20, G02F 1/1335

(21) International Application Number: PCT/US02/39864

(22) International Filing Date:
13 December 2002 (13.12.2002)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
60/346,738 7 January 2002 (07.01.2002) US
10/243,094 13 September 2002 (13.09.2002) US
10/278,353 22 October 2002 (22.10.2002) US
10/278,352 22 October 2002 (22.10.2002) US

(71) Applicant (for all designated States except US): **CLAIR-VOYANTE LABORATORIES, INC.** [US/US]; 874 Gravenstein Highway South, Suite 14, Sebastopol, CA 95472 (US).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **BROWN EL-LIOTT, Candice, Hellen** [US/US]; 531 York Street, Vallejo, CA 95490 (US). **CREDELLE, Thomas, Lloyd** [US/US]; 407 Scotts Bluff Place, Morgan Hill, CA 95037 (US). **HIGGINS, Michael, Francis** [US/US]; P.O. Box 197, Duncans Mills, CA 95430 (US).

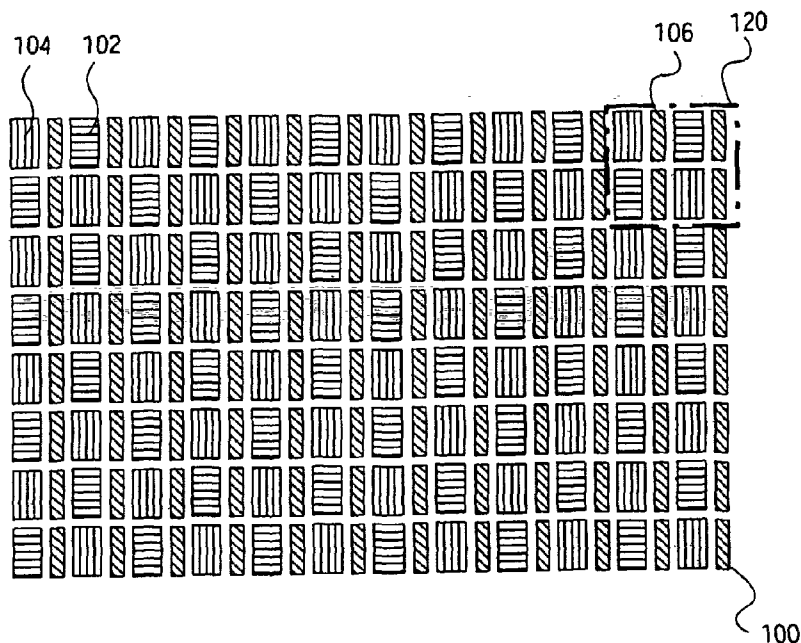
(74) Agent: **GARRETT, Arthur, S.**; Finnegan, Henderson, Farabow Garrett & Dunner, L.L.P., 1300 I Street, N.W., Washington, DC 20005-3315 (US).

(81) Designated States (national): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, 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, MA, MD, MG, MK, MN, MW, MX, MZ, NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (regional): ARIPO patent (GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW),

[Continued on next page]

(54) Title: COLOR FLAT PANEL DISPLAY SUB-PIXEL ARRANGEMENTS AND LAYOUTS FOR SUB-PIXEL RENDERING WITH INCREASED MODULATION TRANSFER FUNCTION



(57) Abstract: Various embodiment of a sub-pixel octal grouping are disclosed. The octal grouping (120) may comprise three-color sub-pixels with one colored sub-pixel (106) comprising twice the number of positions within the octal sub-pixel grouping as the other two colored sub-pixels (102, 104). Various embodiments for performing sub-pixel rendering on the sub-pixel groupings are disclosed.

WO 03/060870 A1



Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM),
European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE,
ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE, SI, SK,
TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
GW, ML, MR, NE, SN, TD, TG).

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.

Published:

— *with international search report*