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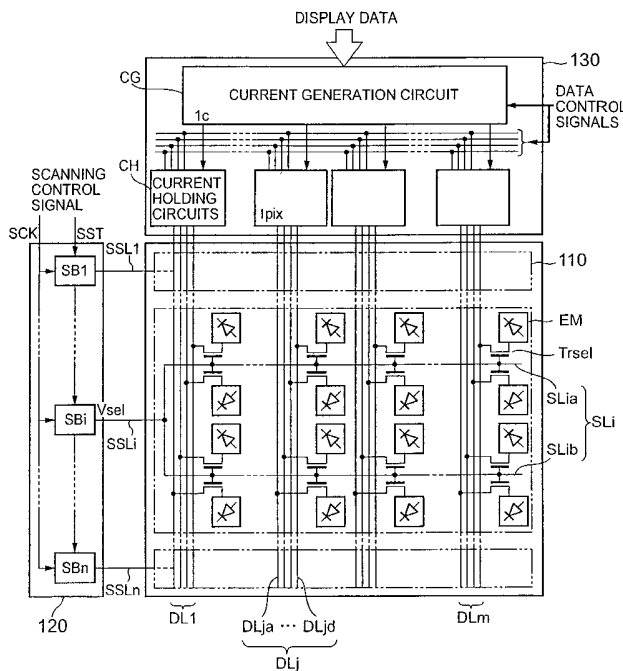
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[Continued on next page]

(54) Title: A DRIVE DEVICE AND A DISPLAY DEVICE



(57) Abstract: The display device of the present invention comprising a display panel (110) which comprises a plurality of scanning lines (SL<sub>ia</sub>, SL<sub>ib</sub>) arranged in rows and a plurality of data lines (DL<sub>ja</sub> ... DL<sub>jd</sub>) arranged in columns; and a plurality of display pixels (EM) arranged in matrix form near the intersecting point of the plurality of scanning lines and the plurality of data lines; a scanning driver circuit (120) which selects simultaneously the display pixels of a plurality of rows connected to some of the plurality of scanning lines of the display panel; and a signal driver circuit (130) which comprises a current generation circuit (CG) which generates signal currents and supplies the display data that provides the display gradation for each of the display pixels and have a current value according to the value of the display data and a plurality of current holding circuits (CH) supplied with the signal currents which take in and hold the signal currents corresponding to the display pixels of the plurality of rows selected by the scanning driver circuit (120) and outputs simultaneously the gradation currents to each of the plurality of display pixels in the plurality of scanning lines based on the signal currents. The display panel comprising a plurality of scanning line groups (SL<sub>i</sub>) which constitute sets of the plurality of scanning lines

through which simultaneous selection is performed by the scanning driver circuit; a plurality of scanning signal lines (SSL<sub>i</sub>) which are connected to each of the plurality of scanning line groups; and a plurality of data line groups (DL<sub>j</sub>) which constitute sets of the plurality of data lines corresponding to the line count of the display pixels of the plurality of rows connected to each of the scanning line groups within the plurality of data lines.

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**Declarations under Rule 4.17:**

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, 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, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), 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, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

- of inventorship (Rule 4.17(iv)) for US only

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- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

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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.

<b>A. CLASSIFICATION OF SUBJECT MATTER</b> IPC 7 G09G3/32		
According to International Patent Classification (IPC) or to both national classification and IPC		
<b>B. FIELDS SEARCHED</b> Minimum documentation searched (classification system followed by classification symbols) IPC 7 G09G		
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 practical, search terms used) EPO-Internal, PAJ		
<b>C. DOCUMENTS CONSIDERED TO BE RELEVANT</b>		
Category °	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 94/00962 A (UNITED TECHNOLOGIES CORP) 6 January 1994 (1994-01-06)	1-3,9-12
Y	the whole document	4-7, 13-25, 27-41
X	----- PATENT ABSTRACTS OF JAPAN vol. 2000, no. 05, 14 September 2000 (2000-09-14) -& JP 2000 056730 A (CANON INC), 25 February 2000 (2000-02-25)	1-3,9-12
Y	abstract	4-7, 13-25, 27-41
P,X	-& US 6 603 450 B1 (ABE NAOTO ET AL) 5 August 2003 (2003-08-05)	1-3,9-12
P,Y	-----	4-7
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<input checked="" type="checkbox"/> Further documents are listed in the continuation of box C. <input checked="" type="checkbox"/> Patent family members are listed in annex.		
° Special categories of cited documents :		
"A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier document but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed		"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art. "&" document member of the same patent family
Date of the actual completion of the international search  7 September 2004		Date of mailing of the international search report  11 8. 10. 04
Name and mailing address of the ISA European Patent Office, P.B. 5818 Patentlaan 2 NL - 2280 HV Rijswijk Tel. (+31-70) 340-2040, Tx. 31 651 epo nl, Fax: (+31-70) 340-3016		Authorized officer  Harke, M

C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT		
Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5 721 563 A (MEMIDA YUUICHI) 24 February 1998 (1998-02-24) the whole document	4-7, 22-25
Y	----- SHIMA T ET AL: "PRINCIPLE AND APPLICATIONS OF AN AUTOCHARGE-COMPENSATED SAMPLE AND HOLD CIRCUIT" IEEE JOURNAL OF SOLID-STATE CIRCUITS, IEEE INC. NEW YORK, US, vol. 30, no. 8, 1 August 1995 (1995-08-01), pages 906-911, XP000524389 ISSN: 0018-9200 the whole document	4-7, 22-25
P,X	----- WO 2004/006218 A (CASIO COMPUTER CO LTD ; HATTORI REIJI (JP)) 15 January 2004 (2004-01-15) the whole document	1-12
P,X	----- WO 2004/003877 A (CASIO COMPUTER CO LTD ; HATTORI REIJI (JP)) 8 January 2004 (2004-01-08) the whole document	1-12
Y	----- US 6 429 601 B1 (BURROUGHS JEREMY H ET AL) 6 August 2002 (2002-08-06) the whole document	13-25, 27-41
Y	----- EP 0 837 445 A (CANON KK) 22 April 1998 (1998-04-22) the whole document	13-25, 27-41
Y	----- US 2002/167479 A1 (ALBU REMUS L ET AL) 14 November 2002 (2002-11-14) the whole document	13-25, 27-41
Y	----- EP 1 260 958 A (LG ELECTRONICS INC) 27 November 2002 (2002-11-27) the whole document	13-25, 27-41
Y	----- US 6 366 026 B1 (SAITO YOSHINORI ET AL) 2 April 2002 (2002-04-02) the whole document	13-25, 27-41
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Form PCT/ISA/210 (continuation of second sheet) (January 2004)

**Box II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This International Search Report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1.  Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
  
2.  Claims Nos.:  
because they relate to parts of the International Application that do not comply with the prescribed requirements to such an extent that no meaningful International Search can be carried out, specifically:
  
3.  Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box III Observations where unity of invention is lacking (Continuation of Item 3 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1.  As all required additional search fees were timely paid by the applicant, this International Search Report covers all searchable claims.
  
2.  As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
  
3.  As only some of the required additional search fees were timely paid by the applicant, this International Search Report covers only those claims for which fees were paid, specifically claims Nos.:
  
4.  No required additional search fees were timely paid by the applicant. Consequently, this International Search Report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

**Remark on Protest**

- The additional search fees were accompanied by the applicant's protest.
- No protest accompanied the payment of additional search fees.

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