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(71) Applicant: **Samsung SDI Co., Ltd.**  
**Suwon-si,**  
**Gyeonggi-do (KR)**

(72) Inventor: **Shin, Dong Yong,**  
**Samsung SDI Co, Ltd.**  
**Yongin-si, Gyeonggi-do (KR)**

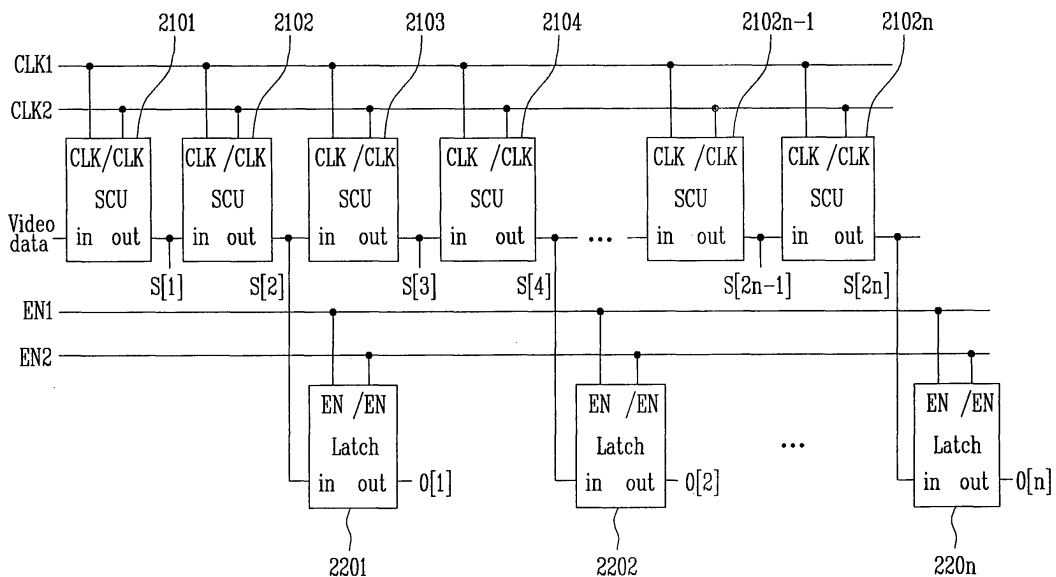
(74) Representative: **Mouteney, Simon James**  
**Marks & Clerk**  
**90 Long Acre**  
**London**  
**WC2E 9RA (GB)**

(54) **Data driving circuit and electroluminescent display using the same**

(57) A data driving circuit may include a shift register unit which may further include a plurality of first stages connected in series that may receive data signals and may output the data signals, in which each first stage may receive the data signals output from a preceding first stage, a latch unit including a plurality of second stages, in which each second stage may be connected to a

different predetermined first stage, in which each second stage receives the data signals output from the predetermined first stage, in which the number of second stages may be substantially half the number of the first stages, and a D/A converter connected to the latch unit which may receive digital data signals and output analog data signals.

FIG. 4



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EUROPEAN SEARCH REPORT

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| DOCUMENTS CONSIDERED TO BE RELEVANT  |  |   |   |
|--|--|---|---|
| Category   | Citation of document with indication, where appropriate, of relevant passages  | Relevant to claim   | CLASSIFICATION OF THE APPLICATION (IPC) |
| X  | US 6 784 864 B1 (KOYAMA JUN [JP] ET AL)<br>31 August 2004 (2004-08-31)<br>* figures 1-3,5,6 *<br>* column 1, line 6 - line 11 *<br>* column 2, line 50 - line 56 *<br>* column 2, line 63 - column 3, line 8 *<br>* column 6, line 1 - line 3 *<br>----- | 1-4,7-9,<br>12-15   | INV.<br>G09G3/32                        |
| A  | US 6 339 631 B1 (YEO JU CHEON [KR] ET AL)<br>15 January 2002 (2002-01-15)<br>* figures 6,10 *<br>-----   | 5,6,10,<br>11   |   |
|  |  |   | TECHNICAL FIELDS SEARCHED (IPC)         |
|  |  |   | G11C<br>G09G                            |
| The present search report has been drawn up for all claims   |  |   |   |
| Place of search<br><b>The Hague</b>  |  | Date of completion of the search<br><b>17 November 2008</b>   | Examiner<br><b>Maciu, Emanoil</b>       |
| CATEGORY OF CITED DOCUMENTS<br>X : particularly relevant if taken alone<br>Y : particularly relevant if combined with another document of the same category<br>A : technological background<br>O : non-written disclosure<br>P : intermediate document |  | T : theory or principle underlying the invention<br>E : earlier patent document, but published on, or after the filing date<br>D : document cited in the application<br>L : document cited for other reasons<br>.....<br>& : member of the same patent family, corresponding document |   |

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**ANNEX TO THE EUROPEAN SEARCH REPORT  
ON EUROPEAN PATENT APPLICATION NO.**

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This annex lists the patent family members relating to the patent documents cited in the above-mentioned European search report. The members are as contained in the European Patent Office EDP file on  
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| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|--|------------------|-------------------------|------------------|
| US 6784864 B1                          | 31-08-2004       | TW 523730 B             | 11-03-2003       |
| US 6339631 B1                          | 15-01-2002       | KR 20000059298 A        | 05-10-2000       |

EPO FORM P0459

For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

|                |   |         |            |
|----------------|---|---------|------------|
| 专利名称(译)        | 数据驱动电路和使用它的电致发光显示器  |         |            |
| 公开(公告)号        | <a href="#">EP1783739A3</a>   | 公开(公告)日 | 2008-12-24 |
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| [标]申请(专利权)人(译) | 三星斯笛爱股份有限公司   |         |            |
| 申请(专利权)人(译)    | 三星SDI CO. , LTD.  |         |            |
| 当前申请(专利权)人(译)  | 三星DISPLAY CO. , LTD.  |         |            |
| 发明人            | SHIN, DONG YONG, SAMSUNG SDI CO, LTD.                                   |         |            |
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| 优先权            | 1020050106171 2005-11-07 KR   |         |            |
| 其他公开文献         | EP1783739B1<br>EP1783739A2  |         |            |
| 外部链接           | <a href="#">Espacenet</a>   |         |            |

摘要(译)

数据驱动电路可以包括移位寄存器单元，该移位寄存器单元还可以包括串联连接的多个第一级，其可以接收数据信号并且可以输出数据信号，其中每个第一级可以接收从前一级输出的数据信号。锁存单元，包括多个第二级，其中每个第二级可以连接到不同的预定第一级，其中每个第二级接收从预定第一级输出的数据信号，其中第二级的数量可以是基本上是第一级的数量的一半，并且连接到锁存单元的D/A转换器可以接收数字数据信号并输出模拟数据信号。

