



(12) **EUROPEAN PATENT APPLICATION**

(88) Date of publication A3:
31.12.2008 Bulletin 2009/01

(51) Int Cl.:
G09G 3/36^(2006.01)

(43) Date of publication A2:
19.12.2007 Bulletin 2007/51

(21) Application number: **07011306.3**

(22) Date of filing: **08.06.2007**

(84) Designated Contracting States:
AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HU IE IS IT LI LT LU LV MC MT NL PL PT RO SE SI SK TR
Designated Extension States:
AL BA HR MK RS

(71) Applicant: **Samsung Electronics Co., Ltd.**
Yeongtong-gu
Suwon-city, Gyeonggi-do 442-742 (KR)

(72) Inventor: **Moon, Hoi-sik**
Chungcheongnam-do (KR)

(30) Priority: **15.06.2006 KR 20060054072**

(74) Representative: **Weitzel, Wolfgang**
Friedenstrasse 10
89522 Heidenheim (DE)

(54) **Signal processing device, liquid crystal display having the same and method of manufacturing the same**

(57) A signal processing device (200) includes a converting unit (230) converting first, second, and third image data into first sub first image data, first sub second image data, and first sub third image data having gray levels higher than the gray levels of first, second, and third image data, respectively, and second sub first image data, second sub second image data, and second sub third image data having gray levels lower than the gray levels of the first, second, and third image data, respectively, a first correcting unit (260) which compares the first sub image data, corrects the first sub second image data according to the comparison result, and outputs corrected first sub second image data, and a second correcting unit (280) which compares the second sub image data, corrects the second sub second image data according to the comparison result, and outputs corrected second sub second image data.

FIG. 1

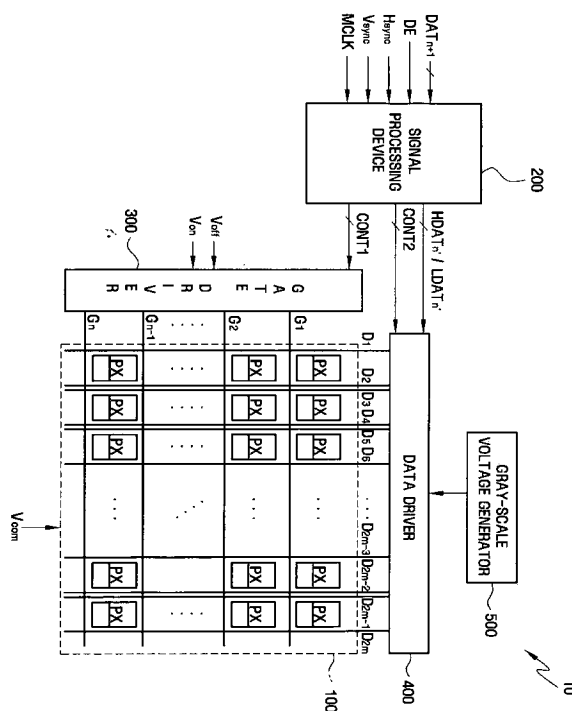
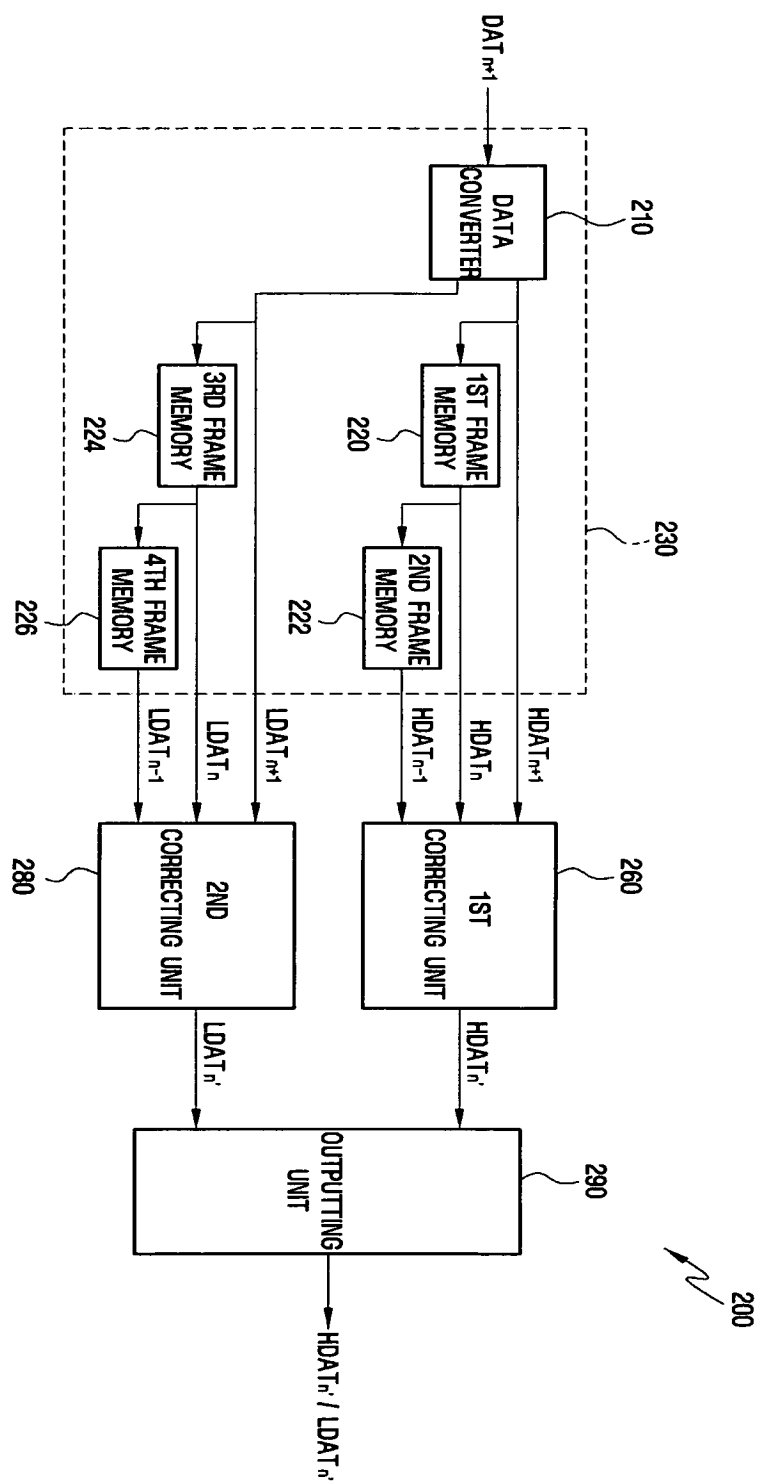


FIG. 3





EUROPEAN SEARCH REPORT

Application Number
EP 07 01 1306

DOCUMENTS CONSIDERED TO BE RELEVANT			
Category	Citation of document with indication, where appropriate, of relevant passages	Relevant to claim	CLASSIFICATION OF THE APPLICATION (IPC)
Y	SANG SOO KIM DEVELOPMENT CENTER ET AL: "66.1: Invited Paper: The Worlds Largest (82-in.) TFT-LCD" 2005 SID INTERNATIONAL SYMPOSIUM. BOSTON, MA, MAY 24 - 27, 2005; [SID INTERNATIONAL SYMPOSIUM], SAN JOSE, CA : SID, US, vol. XXXVI, 24 May 2005 (2005-05-24), pages 1842-1847, XP007012410 * the whole document *	1-19	INV. G09G3/36
Y	EP 1 467 346 A (SAMSUNG ELECTRONICS CO LTD [KR]) 13 October 2004 (2004-10-13) * paragraphs [0001], [0003], [0004], [0016] - [0018], [0024], [0028], [0029]; figures 3-6 *	1-19	
Y	SONG J-K ET AL: "DCCII: NOVEL METHOD FOR FAST RESPONSE TIME IN PVA MODE" 2004 SID INTERNATIONAL SYMPOSIUM DIGEST OF TECHNICAL PAPERS. SEATTLE, WA, MAY 25 - 27, 2004; [SID INTERNATIONAL SYMPOSIUM DIGEST OF TECHNICAL PAPERS], SAN JOSE, CA : SID, US, vol. 35, no. 2, 26 May 2004 (2004-05-26), pages 1344-1347, XP001222866 * the whole document *	1-19	TECHNICAL FIELDS SEARCHED (IPC) G09G
Y	US 2006/071927 A1 (CHANG HAK-SUN [KR] ET AL) 6 April 2006 (2006-04-06) * paragraphs [0007] - [0013], [0133] - [0153]; figures 7,8,10 *	1-19	
E	US 2007/257874 A1 (KIM JONG-WOO [KR]) 8 November 2007 (2007-11-08) * paragraphs [0003], [0007], [0009] - [0012], [0059], [0070], [0153] - [0187]; figures 2,3,7,8,15 *	1-19	
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 6 November 2008	Examiner Taron, Laurent
CATEGORY OF CITED DOCUMENTS X : particularly relevant if taken alone Y : particularly relevant if combined with another document of the same category A : technological background O : non-written disclosure P : intermediate document T : theory or principle underlying the invention E : earlier patent document, but published on, or after the filing date D : document cited in the application L : document cited for other reasons & : member of the same patent family, corresponding document			

EPO FORM 1503 03.82 (P04C01)

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

EP 07 01 1306

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
The European Patent Office is in no way liable for these particulars which are merely given for the purpose of information.

06-11-2008

Patent document cited in search report	Publication date	Patent family member(s)	Publication date
EP 1467346 A	13-10-2004	CN 1571008 A	26-01-2005
		JP 2004310113 A	04-11-2004
		US 2008211755 A1	04-09-2008
		US 2004196274 A1	07-10-2004

US 2006071927 A1	06-04-2006	CN 1758117 A	12-04-2006
		JP 2006106663 A	20-04-2006
		KR 20060029858 A	07-04-2006

US 2007257874 A1	08-11-2007	CN 1983378 A	20-06-2007
		JP 2007164195 A	28-06-2007
		KR 20070063173 A	19-06-2007

专利名称(译)	信号处理装置，具有该信号处理装置的液晶显示器及其制造方法		
公开(公告)号	EP1868179A3	公开(公告)日	2008-12-31
申请号	EP2007011306	申请日	2007-06-08
[标]申请(专利权)人(译)	三星电子株式会社		
申请(专利权)人(译)	SAMSUNG ELECTRONICS CO., LTD.		
当前申请(专利权)人(译)	SAMSUNG ELECTRONICS CO., LTD.		
[标]发明人	MOON HOI SIK		
发明人	MOON, HOI-SIK		
IPC分类号	G09G3/36		
CPC分类号	G09G3/2074 G09G3/3648 G09G2300/0447 G09G2320/0252 G09G2320/028 G09G2340/16		
代理机构(译)	韦策尔，WOLFGANG		
优先权	1020060054072 2006-06-15 KR		
其他公开文献	EP1868179B1 EP1868179A2		
外部链接	Espacenet		

摘要(译)

信号处理设备 (200) 包括转换单元 (230)，其将第一，第二和第三图像数据转换为第一子第一图像数据，第一子第二图像数据和具有高于灰度级的灰度级的第一子第三图像数据分别具有第一，第二和第三图像数据的第一，第二和第三图像数据，以及具有低于第一，第二和第三图像数据的灰度级的灰度级的第二子第一图像数据，第二子第二图像数据和第二子第三图像数据，第一校正单元 (260)，其比较第一子图像数据，根据比较结果校正第一子第二图像数据，并输出校正的第一子第二图像数据，以及第二校正单元 (280)，其比较第一子图像数据。第二子图像数据根据比较结果校正第二子第二图像数据，并输出校正的第二子第二图像数据。

FIG. 1

