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(54) **Liquid crystal display and driving method thereof**

(57) Disclosed is an LCD and driving method thereof. The present invention comprises a data gray signal modifier for receiving gray signals from a data gray signal source, and outputting modification gray signals by consideration of gray signals of present and previous frames; a data driver for changing the modification gray signals into corresponding data voltages and outputting image signals; a gate driver for sequentially supplying scanning

signals; and an LCD panel comprising a plurality of gate lines for transmitting the scanning signals; a plurality of data lines, being insulated from the gate lines and crossing them, for transmitting the image signals; and a plurality of pixels, formed by an area surrounded by the gate lines and data lines and arranged as a matrix pattern, having switching elements connected to the gate lines and data lines.

Fig.5

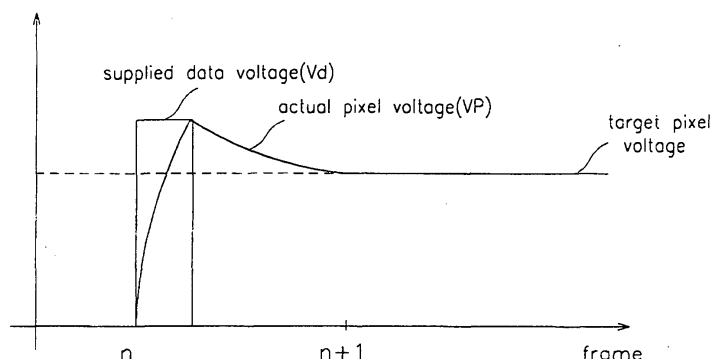


Fig.6

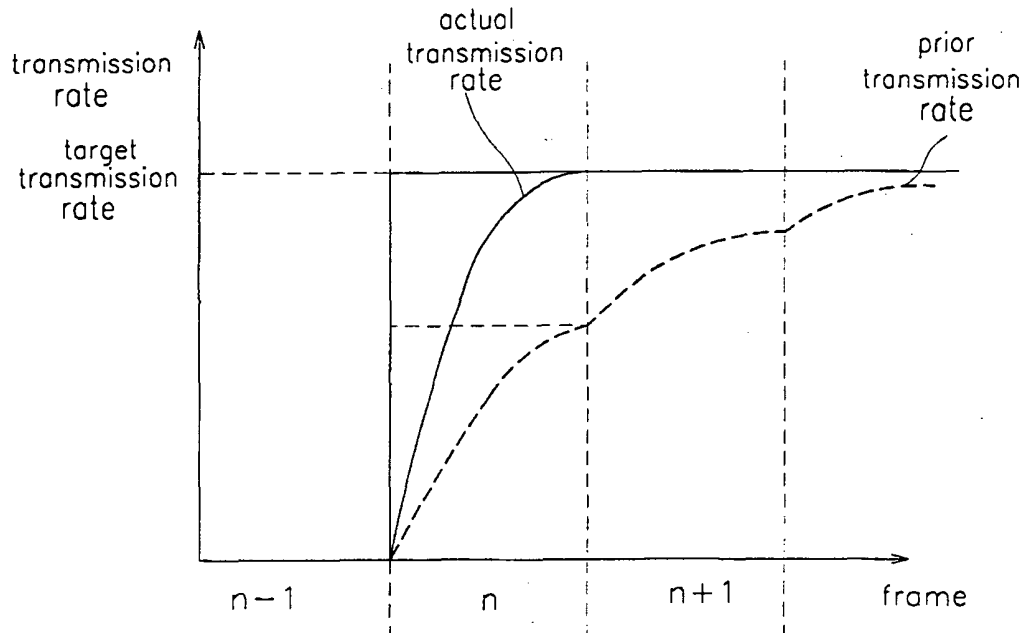
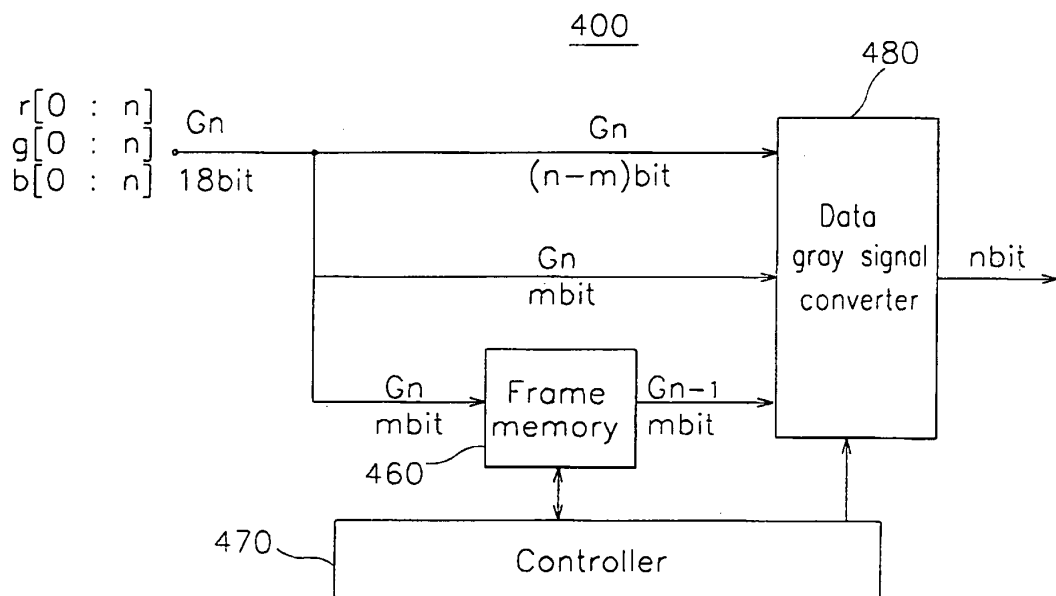


Fig.11





EUROPEAN SEARCH REPORT

Application Number
EP 08 16 0307

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	EP 0 911 795 A2 (CANON KK [JP]) 28 April 1999 (1999-04-28) * paragraphs [0002], [0036] - [0087]; figures 2-5 *	1-3,7-9	INV. G09G3/36
X	JP 4 288589 A (TOSHIBA CORP) 13 October 1992 (1992-10-13) * the whole document *	1,9	
			TECHNICAL FIELDS SEARCHED (IPC)
			G09G
The present search report has been drawn up for all claims			
Place of search Munich		Date of completion of the search 16 February 2011	Examiner Demin, Stefan
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			

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**ANNEX TO THE EUROPEAN SEARCH REPORT
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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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16-02-2011

Patent document cited in search report		Publication date		Patent family member(s)		Publication date
EP 0911795	A2	28-04-1999	JP	3305240 B2		22-07-2002
			JP	11126050 A		11-05-1999
			US	6501451 B1		31-12-2002

JP 4288589	A	13-10-1992	JP	3167351 B2		21-05-2001

专利名称(译)	液晶显示器及其驱动方法		
公开(公告)号	EP1995718A3	公开(公告)日	2011-03-23
申请号	EP2008160307	申请日	2001-01-31
[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)	三星DISPLAY CO. , LTD.		
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IPC分类号	G09G3/36 G02F1/133 G09G3/20 G09G5/39		
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优先权	1020000043509 2000-07-27 KR 1020000005442 2000-02-03 KR 1020000073672 2000-12-06 KR		
其他公开文献	EP1995718A2		
外部链接	Espacenet		

摘要(译)

公开了一种LCD及其驱动方法。本发明包括数据灰度信号修正器，用于接收来自数据灰度信号源的灰度信号，并通过考虑当前帧和前一帧的灰度信号输出修改灰度信号;数据驱动器，用于将修改的灰度信号改变为相应的数据电压并输出图像信号;用于顺序提供扫描信号的栅极驱动器; LCD面板，包括多条栅极线，用于传输扫描信号;多条数据线，与栅极线绝缘并交叉，用于传输图像信号;多个像素，由栅极线和数据线围绕的区域形成，并且布置为矩阵图案，具有连接到栅极线和数据线的开关元件。

Fig.5

