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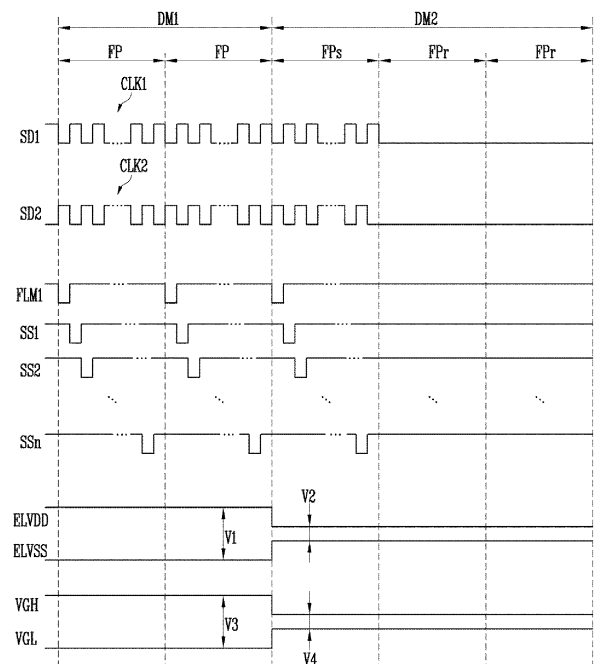
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(54) **DISPLAY DEVICE AND RELATED OPERATING METHOD**

(57) An organic light emitting display device may include a display panel, a power supply, and a display driver. The display panel may comprise a plurality of scan lines, a plurality of data lines, and a plurality of pixels connected to the scan lines and to the data lines. The power supply may supply a first pixel voltage and a second pixel voltage to the pixels. The display driver may control the display panel. The display panel may display a first image in a first frame frequency during a first driving mode, and display a second image in a second frame frequency that is lower than the first frame frequency during a second driving mode, according to a control by the display driver

FIG. 7



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	* figure 1 *		
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The present search report has been drawn up for all claims			
Place of search The Hague		Date of completion of the search 28 September 2017	Examiner Fanning, Neil
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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Place of search		Date of completion of the search	Examiner
The Hague		28 September 2017	Fanning, Neil
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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CLAIMS INCURRING FEES

The present European patent application comprised at the time of filing claims for which payment was due.

☐ Only part of the claims have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due and for those claims for which claims fees have been paid, namely claim(s):

☐ No claims fees have been paid within the prescribed time limit. The present European search report has been drawn up for those claims for which no payment was due.

LACK OF UNITY OF INVENTION

The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

see sheet B

☒ All further search fees have been paid within the fixed time limit. The present European search report has been drawn up for all claims.

☐ As all searchable claims could be searched without effort justifying an additional fee, the Search Division did not invite payment of any additional fee.

☐ Only part of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the inventions in respect of which search fees have been paid, namely claims:

☐ None of the further search fees have been paid within the fixed time limit. The present European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims, namely claims:

☐ The present supplementary European search report has been drawn up for those parts of the European patent application which relate to the invention first mentioned in the claims (Rule 164 (1) EPC).



LACK OF UNITY OF INVENTION
SHEET B

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The Search Division considers that the present European patent application does not comply with the requirements of unity of invention and relates to several inventions or groups of inventions, namely:

1. claims: 4, 5(completely); 1-3(partially)

The additional subject-matter of the claims forming Group I is related to the stopping of the data driver during the second mode. The problem addressed by this subject-matter can therefore be considered as relating to the physical realisation of the data driver.

2. claims: 6-17(completely); 1-3(partially)

The additional subject-matter of the claims forming Group II is related to the provision of different driving voltages to the scan driver. The problem addressed by this subject-matter can therefore be considered as relating to the physical realisation of the scan driver.

3. claims: 18-26(completely); 1-3(partially)

The additional subject-matter of the claims forming Group III is related to the provision of emission control lines to the pixels of the display device. The problem addressed by this subject-matter can therefore be considered as relating to the physical realisation of the display pixels.

4. claims: 27-30

The subject-matter of these claims is directed towards a method of driving an OLED display device using different pixel voltages in different driving modes. The problem addressed by this subject-matter can therefore be considered as relating to the selection of pixel voltages for use in driving the display.

**ANNEX TO THE EUROPEAN SEARCH REPORT
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For more details about this annex : see Official Journal of the European Patent Office, No. 12/82

专利名称(译)	显示装置和相关的操作方法		
公开(公告)号	EP3193323A3	公开(公告)日	2017-11-08
申请号	EP2016194505	申请日	2016-10-19
[标]申请(专利权)人(译)	三星显示有限公司		
申请(专利权)人(译)	三星DISPLAY CO. , LTD.		
当前申请(专利权)人(译)	三星DISPLAY CO. , LTD.		
[标]发明人	JEON JIN		
发明人	JEON, JIN		
IPC分类号	G09G3/3266 G09G3/3225		
CPC分类号	G09G3/3258 G09G2310/0264 G09G3/3225 G09G3/3266 G09G2300/0852 G09G2300/0861 G09G2310/0262 G09G2310/0286 G09G2320/0247 G09G2330/021 G09G2330/028 G09G2340/0435 G09G3/3275 G09G2310/0213 G09G2310/0278 G09G2310/08		
审查员(译)	范宁, NEIL		
优先权	1020160006086 2016-01-18 KR		
其他公开文献	EP3193323A2		
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摘要(译)

有机发光显示装置可包括显示面板，电源和显示驱动器。显示面板可包括多条扫描线，多条数据线，以及连接到扫描线的多个像素，并且数据线。电源可以向像素提供第一像素电压和第二像素电压。显示驱动器可以控制显示面板。根据显示器的控制，显示面板可以在第一驱动模式期间以第一帧频率显示第一图像，并且在第二驱动模式期间以低于第一帧频率的第二帧频率显示第二图像。司机

