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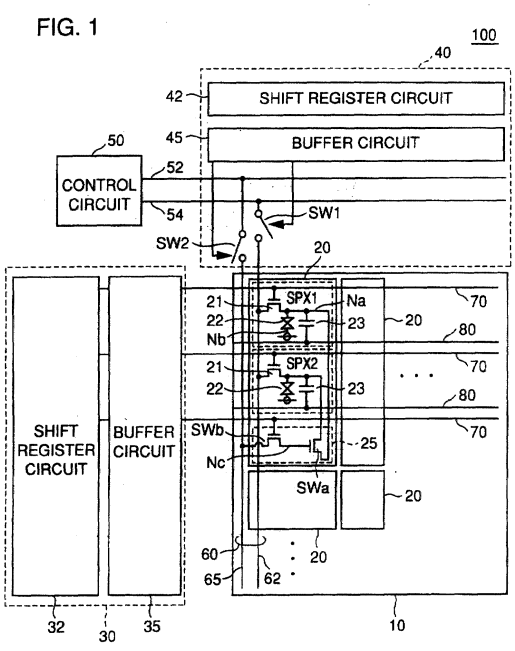
(54) Liquid crystal display device implementing gray scale based on digital data as well as portable telephone and portable digital assistance device provided with the same

(57) Each of pixels (20) arranged in a matrix is divided into a plurality of sub pixels. Horizontal scanning lines (60) and vertical scanning lines (70) are arranged corresponding to rows and columns of the sub pixels, so that each sub pixel can independently be turned on/off. Each pixel (20) includes a sub pixel connection circuit (25) arranged between the sub pixels. Sub pixel connection circuit (25) connects the pixel electrodes of corresponding sub pixels in accordance with a sub pixel connection signal input from a data line (65) in synchronization with activation of vertical scanning line (70).

FIG. 1



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EUROPEAN SEARCH REPORT

Application Number
EP 01 10 0983

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The present search report has been drawn up for all claims

Place of search	Date of completion of the search	Examiner
MUNICH	25 February 2002	Harke, M

CATEGORY OF CITED DOCUMENTS

X : particularly relevant if taken alone
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A : technological background
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ANNEX TO THE EUROPEAN SEARCH REPORT ON EUROPEAN PATENT APPLICATION NO. EP 01 10 0983

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25-02-2002

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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)	实现基于数字数据的灰度级的液晶显示装置以及具有该液晶显示装置的便携式电话和便携式数字辅助装置		
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申请号	EP2001100983	申请日	2001-01-17
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CPC分类号	G09G3/3659 G09G3/2074 G09G2300/0828 G09G2300/0842 G09G2330/021		
优先权	2000098110 2000-03-31 JP		
其他公开文献	EP1139328B1 EP1139328A2		
外部链接	Espacenet		

摘要(译)

以矩阵排列的每个像素（20）被分成多个子像素。水平扫描线（60）和垂直扫描线（70）对应于子像素的行和列布置，使得每个子像素可以独立地接通/断开。每个像素（20）包括布置在子像素之间的子像素连接电路（25）。子像素连接电路（25）与垂直扫描线（70）的激活同步地根据从数据线（65）输入的子像素连接信号连接相应子像素的像素电极。