

Title (en)

METHODS FOR DRIVING BISTABLE ELECTRO-OPTIC DISPLAYS

Title (de)

VERFAHREN ZUR ANSTEUERUNG BISTABILER ELEKTRO-OPTISCHER ANZEIGEN

Title (fr)

PROCÉDÉS DE COMMANDES D'AFFICHAGES POUR AFFICHEURS ÉLECTRO-OPTIQUES BISTABLES

Publication

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Application

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Abstract (en)

A bistable electro-optic display has a plurality of pixels, each of which is capable of displaying at least three gray levels. The display is driven by a method comprising: storing a look-up table containing data representing the impulses necessary to convert an initial gray level to a final gray level; storing data representing at least an initial state of each pixel of the display; receiving an input signal representing a desired final state of at least one pixel of the display; and generating an output signal representing the impulse necessary to convert the initial state of the one pixel to the desired final state thereof, as determined from the look-up table. The invention also provides a method for reducing the remnant voltage of an electro-optic display.

IPC 8 full level

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Citation (applicant)

- US 6323602 A 20020402
- WO 02079869 A1 20021010 - E INK CORP [US]
- US 5808783 A 19980915 - CROWLEY JOSEPH M [US]
- US 5777782 A 19980707 - SHERIDON NICHOLAS K [US]
- US 5760761 A 19980602 - SHERIDON NICHOLAS K [US]
- US 6054071 A 20000425 - MIKKELSEN JR JAMES C [US]
- US 6055091 A 20000425 - SHERIDON NICHOLAS K [US], et al
- US 6097531 A 20000801 - SHERIDON NICHOLAS K [US]
- US 6128124 A 20001003 - SILVERMAN ALEXANDER E [US]
- US 6137467 A 20001024 - SHERIDON NICHOLAS K [US], et al
- US 6147791 A 20001114 - SHERIDON NICHOLAS K [US]
- US 6301038 B1 20011009 - FITZMAURICE DONALD [IE], et al
- WO 0127690 A2 20010419 - UNIV DUBLIN [IE], et al
- US 5930026 A 19990727 - JACOBSON JOSEPH M [US], et al
- US 5961804 A 19991005 - JACOBSON JOSEPH [US], et al
- US 6017584 A 20000125 - ALBERT JONATHAN D [US], et al
- US 6067185 A 20000523 - ALBERT JONATHAN D [US], et al
- US 6118426 A 20000912 - ALBERT JONATHAN D [US], et al
- US 6120588 A 20000919 - JACOBSON JOSEPH M [US]
- US 6120839 A 20000919 - COMISKEY BARRETT [US], et al
- US 6124851 A 20000926 - JACOBSON JOSEPH M [US]
- US 6130773 A 20001010 - JACOBSON JOSEPH M [US], et al
- US 6130774 A 20001010 - ALBERT JONATHAN D [US], et al
- US 6172798 B1 20010109 - ALBERT JONATHAN D [US], et al
- US 6177921 B1 20010123 - COMISKEY BARRETT [US], et al
- US 6232950 B1 20010515 - ALBERT JONATHAN D [US], et al
- US 6249721 B1 20010619 - LOHBERG PETER [DE], et al
- US 6252564 B1 20010626 - ALBERT JONATHAN D [US], et al
- US 6262706 B1 20010717 - ALBERT JONATHAN D [US], et al
- US 6262833 B1 20010717 - LOXLEY ANDREW [US], et al
- US 6300932 B1 20011009 - ALBERT JONATHAN D [US]
- US 6312304 B1 20011106 - DUTHALER GREGG M [US], et al
- US 6312971 B1 20011106 - AMUNDSON KARL [US], et al
- US 6323989 B1 20011127 - JACOBSON JOSEPH M [US], et al
- US 6327072 B1 20011204 - COMISKEY BARRETT [US], et al
- US 6376828 B1 20020423 - COMISKEY BARRETT [US]
- US 6377387 B1 20020423 - DUTHALER GREGG M [US], et al
- US 6392785 B1 20020521 - ALBERT JONATHAN D [US], et al
- US 6392786 B1 20020521 - ALBERT JONATHAN D [US]
- US 6413790 B1 20020702 - DUTHALER GREGG [US], et al
- US 6422687 B1 20020723 - JACOBSON JOSEPH M [US]
- US 6445374 B2 20020903 - ALBERT JONATHAN D [US], et al

- US 6445489 B1 20020903 - JACOBSON JOSEPH M [US], et al
- US 6459418 B1 20021001 - COMISKEY BARRETT [US], et al
- US 2001045934 A1 20011129 - TURNER CHRISTOPHER [US], et al
- US 2002019081 A1 20020214 - DENIS KEVIN L [US], et al
- US 2002021270 A1 20020221 - ALBERT JONATHAN D [US]
- US 2002053900 A1 20020509 - JACOBSON JOSEPH M [US], et al
- US 2002060321 A1 20020523 - KAZLAS PETER T [US], et al
- US 2002063661 A1 20020530 - COMISKEY BARRETT [US], et al
- US 2002063677 A1 20020530 - DRZAIC PAUL [US]
- US 2002090980 A1 20020711 - WILCOX RUSSELL J [US], et al
- US 2002106847 A1 20020808 - KAZLAS PETER T [US], et al
- US 2002113770 A1 20020822 - JACOBSON JOSEPH M [US], et al
- US 2002130832 A1 20020919 - BAUCOM ALLAN SCOTT [US], et al
- US 2002131147 A1 20020919 - PAOLINI RICHARD J [US], et al
- US 2002154382 A1 20021024 - MORRISON IAN D [US], et al
- WO 9953373 A1 19991021 - E INK CORP [US]
- WO 9959101 A2 19991118 - E INK CORP [US]
- WO 9967678 A2 19991229 - E INK CORP [US]
- WO 0005704 A1 20000203 - E INK CORP [US], et al
- WO 0020922 A1 20000413 - E INK CORP [US]
- WO 0038000 A1 20000629 - E INK CORP [US]
- WO 0038001 A1 20000629 - E INK CORP [US]
- WO 0036560 A1 20000622 - E INK CORP [US]
- WO 0036666 A1 20000622 - E INK CORP [US]
- WO 0067110 A1 20001109 - E INK CORP [US]
- WO 0067327 A1 20001109 - E INK CORP [US]
- WO 0107961 A1 20010201 - E INK CORP [US]
- WO 0108241 A1 20010201 - E INK CORP [US]
- WO 0117029 A1 20010308 - E INK CORP [US]
- WO 0117041 A1 20010308 - E INK CORP [US]
- WO 0102899 A2 20010111 - E INK CORP [US]
- US 68390302 A 20020228
- WO 0201281 A2 20020103 - SIPIX IMAGING INC [US]
- US 2002075556 A1 20020620 - LIANG RONG-CHANG [US], et al
- US 56142400 A 20000428
- O'REGAN, B. ET AL., NATURE, vol. 353, 1991, pages 737
- WOOD, D., INFORMATION DISPLAY, vol. 18, no. 3, March 2002 (2002-03-01), pages 24
- BACH, U. ET AL., ADV. MATER., vol. 14, no. 11, 2002, pages 845

Citation (search report)

[XA] US 6236385 B1 20010522 - NOMURA HIROAKI [JP], et al

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 CN 102789764 B 20150527; CN 1589462 A 20050302; CN 1589462 B 20130327; EP 1446791 A2 20040818; EP 1446791 B1 20150909;  
 EP 2916312 A1 20150909; EP 2916312 A8 20151028; EP 2916312 B1 20170628; HK 1073380 A1 20050930; HK 1142162 A1 20101126;  
 HK 1175287 A1 20130628; HK 1176454 A1 20130726; JP 2005509925 A 20050414; JP 2007249230 A 20070927; JP 2007249231 A 20070927;  
 JP 2011128625 A 20110630; JP 2012098733 A 20120524; JP 2013178580 A 20130909; JP 2015028649 A 20150212;  
 JP 2015064588 A 20150409; JP 2017049608 A 20170309; JP 4615860 B2 20110119; JP 4852478 B2 20120111; JP 5618811 B2 20141105;  
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 CN 201210168809 A 20021120; CN 201210168851 A 20021120; EP 02803692 A 20021120; EP 15164029 A 20021120;  
 HK 05106005 A 20050714; HK 10108561 A 20100909; HK 13102545 A 20130228; HK 13102546 A 20130228; JP 2003546324 A 20021120;  
 JP 2007144267 A 20070530; JP 2007144268 A 20070530; JP 2010285213 A 20101221; JP 2011243867 A 20111107;  
 JP 2013117508 A 20130604; JP 2014188690 A 20140917; JP 2014223986 A 20141104; JP 2016230854 A 20161129