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Licensing Opportunities

- Exclusive
- Non-exclusive
- Research
Sponsorship

Lehigh Case # 122804-01

Data Driver for TFT Displays With Uniform Column Current Output

Overview

The technology of this invention proposes a data driver for the standard two TFT pixel that produces high levels of uniformity without the need for an increased number of pixel transistors, thus without increasing the flat panel display complexity. The proposed circuit is targeted at reducing the complexity of active matrix backplanes by providing uniformity levels surpassing those of the current copy pixel and by utilizing the unmodified standard two TFT voltage-driven pixel.

Applications and Advantages

This technology will produce displays with higher aperture ratio (brighter displays), lower OLED operating voltages, lower power consumption, higher yield, and lower production cost. Additionally,

- From experimental data, non-uniformity is reduced from 70% to below 0.5% for two pixels driven with the standard technique and the proposed driver, respectively.
- This uniformity level is up to an order of magnitude better than most current-copy pixels and is able to be held at a constant level
- This data driver can be implemented in standard IC's or on the same panel as the active backplane.
- Since the performance requirements on the transistors on the backplane have been reduced, lower cost technologies can be used for the large area array

Status and Intellectual Property

A PCT application has been filed.

Lehigh ExpertNet

- [Miltiadis Hatalis](http://expert1.cc.lehigh.edu/LehighExperts/ExpertDetail.aspx?ExpertID=70122151) -
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