E-book with Animation Playing Capability Based on Liquid Crystal Display Technology

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Nowadays, there are many different display technologies on the market, including LCD, OLED, Micro LED, E-Book and so on. Each of them has its own advantages and disadvantages. In different applications, people will choose different display technologies for different advantages. For example, the most popular E-Book on the market now is the display technology of electronic ink (E-ink). In addition to the excellent white state and contrast, it is also energy-saving because it can display images without power supply. LCD can also realize this function of E-Book based on bistable LCD. Our group has many experiences in this area, and has developed different bistable display technologies, including BTN, BBT, and so on. When the bistable display was developed at that time, it was not expected to be used to play animation. The switching speed between its two states is not as fast as a normal LCD, so the frame rate is not high enough to play animation, which is the same disadvantage for E-ink and bistable LCD. Does it mean that LCD technology cannot be used to make a bistable display device that can also play animation? In this workshop, we will propose a display technology that combines some of the advantages of LCD and E-ink to achieve the goal of not only playing animation, but also displaying static images without power supply. Although this purpose has not yet been fully achieved, it can be achieved in the near future after further optimization.