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A LAPTOP WITH A ROLLABLE DISPLAY

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A laptop with rollable display

Abstract

This invention discloses a new type of computers with rollable display. The display itself is made on flexible substrate, and binding with another sheet (can be the same sheet) with painting from head to tail. The display as such can be roll to front side or back side and create different applications. When lid is open, the display can roll to front side as a normal laptop, or the display can be roll to back side so the user can share or present the information to others. And then when lid is close, the display can roll to front side as a normal laptop (can't see the screen), or the display can be roll to back side so the user can turn the laptop into tablet mode.

Background

For a conventional notebook, the display emits light only to one direction. And, when the notebook is closed, no display can be seen. However, in some application, people might want to share the screen with others like people in front of him. But the screen only face to the main user so is somehow not convenient. In other application, people might want to turn his laptop into tablet mode. And that may require 360 degree hinge, and the C-deck/keyboard can easily get scratched on the desk.

Considering the flexible/rollable displays is getting more and more mature, we might have chance to see such kind of product in 5 years. Therefore it is the purpose of this invention to take advantage of rollable display and create it's own unique applications.

Some prior art to get the mentioned applications can use two displays, back to back installed in the hinge up. So the main user and others can see different screens, and it can also turn into tablet mode when lid close. However, such approach takes two displays and two signal cables. It makes the system design mode complicated because of two displays. And the thickness is thick and the cost is also high, because of two displays

Invention Description

The display is a rollable display. Binding with a painting sheet (could be a logo) from head to tail. The display sheet and painting sheet can also be the same sheet, but just binding head to tail. When lid is open, the display can face to the user as normal laptop or roll to the other side and face to others for presentation. When lid is close, the display can face to the downside as normal laptop or roll to the up side so it turns to tablet mode.

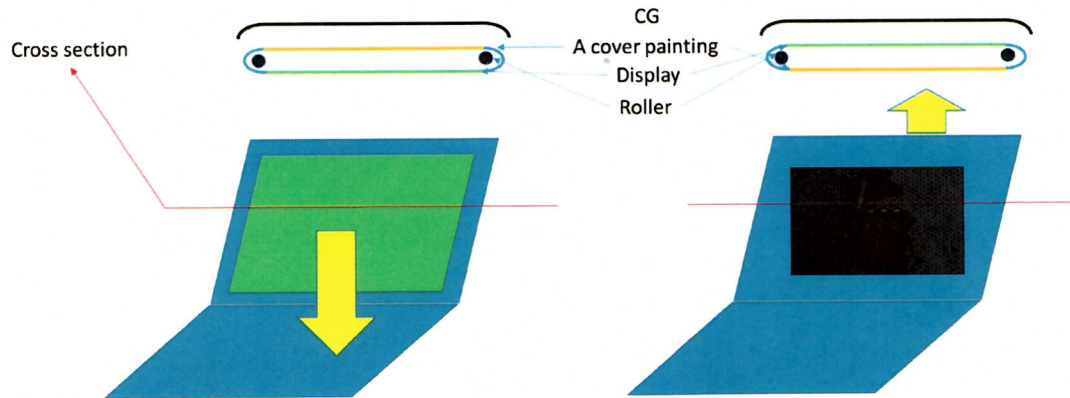


Figure 1. Scenarios when lid is open.

Advantages

- A laptop that can be convertible between notebook / tablet. (and it does not need 360 degree hinge)
- A laptop that can selectively emit the image to front side or back side.
- A laptop that uses fancy rollable display, and is capable to emit light in front side or back side.
- C-deck (such as keyboard/touchpad) is protected when using in tablet mode. (In conventional 360 hinge, C-deck could be scratched during table mode.)
- Only one display and one signal cable is required.
- Can be thinner and cost less than using two displays.

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