Bluetooth pen for controlling Laptop hinge angle

By developing applications of Bluetooth Pen, one of the useful applications is to control NB’s hinge angle.

Considering the NB’s hinge has a micro motor for opening and closing lid, when you press up/down button on Bluetooth Pen around your laptop, it would open/close lid to the angle until you stop press it.

For end user who is not sitting in front of his laptop, busy for talking on the phone, reading books, exercise, …etc. And he/she would like to wake his/her laptop or adjust their lid angle but not required to walk in front of the desk.

Figure 1: Showing how this concept works.

(1) When user takes Bluetooth pen out, press on the up button, checked with EC for the current angle and opening lid until 135 degree maximum. And he can also close lid to 0 degree minimum by press down button.

(2) With this feature, we could encourage end users to use BT pens more frequently as it offers convenient use cases for waking up and open/close lid without sitting in front of laptop.

Pair Bluetooth Pen with System and enable Bluetooth BLE GATT profile

System check EC and record current hinge angle and send to Bluetooth pen and update the hinge angle in real time. Run time update hinge angle in both ends once lid angle has changed.

When Bluetooth Pen press up/down button, updating hinge angle from pen and send to system EC, compare it and if different, system hinge move to the angle accordingly(0-135 degree).

If system is in sleep/ Connected standby mode, wake up the system and follow the above steps for hinge angle (0-135 degree).
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