KEYBOARD BACKLIGHT TURN-OFF WHILE ENTERING USERNAME/PASSWORD

HP INC
Keyboard Backlight Turn-off While Entering Username/Password

Problem:

- In industrial PC (both notebook and desktop), there are product models providing backlight keyboard. It's convenient for a user’s typing in dark environment.
- However, user in bright environment will be easy to notice people around, but not in dark environment.
- Thus, there is security risk while user typing the username/password in dark environment, and other people may have chance to peek easier with the user’s fingers typing on the keyboard with backlight, and without noticing people around his/her
- While user typing passwords, the computer shows “*” or “●” on the display, but backlight keyboard doesn’t have any design to protect from the risk.

Objectives:

1. Design a method that PC can detect user is typing username/password, and PC can temporarily turn-off the keyboard backlight until user completing to access security pages.

Solution:

- Currently have known that keyboard backlight on/off status is controlled with EC (Embed Controller) code in BIOS.
- To can develop a “keyboard backlight on/off “ driver or application to detect the browsers/ OS login page that PC system is requesting user to type username/password. Then, the driver or application can send request to EC to turn-off keyboard backlight.
- Once user completing to access the security check conditions, the driver or application can send notice EC to resume common setting of keyboard backlight.
Flow Chart – Algorithm

- "Keyboard backlight" driver or application provide service
  - Yes: Request EC to turn-off keyboard backlight
  - No: Detect if system requesting username/password
    - Yes: EC keeps common setting of keyboard backlight
    - No: EC keeps common setting of keyboard backlight
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