Request #: HUTRR95
Title: Privacy Screen
Spec Release: 1.12
Requester: Sean O'Brien
Company: Google LLC

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Pages Affected: Consumer (0x0C)
Values checked: By chair (Matthew Williams)
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Current Status: Approved
Priority: Normal

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Required Voter: Apple
Required Voter: Intel
Required Voter: Microsoft

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Voting Begins: 8th May 2020
Voting Ends: 15th May 2020
Voting Result: 5-0-2
Summary:  
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We would like to propose new usages for controlling an electronic privacy screen.

Background:  
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Some displays have an electronic privacy screen which can be activated to prevent others from seeing data on the user's screen, by limiting or obscuring the light that is emitted at an angle far from perpendicular to the screen.

It may be desirable to adjust the privacy level to account for ambient lighting, so the user can achieve their desired screen visibility while maintaining an acceptable level of privacy.

Control for privacy screens may be performed by a dedicated device, or embedded in another device, such as a keyboard. We are proposing new usages to support this as a HID input.
Proposal:
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The proposed change is in chapter 15: Consumer Page (0x0C).

1. Add new usages to Table 17: Consumer Usage Page.

<table>
<thead>
<tr>
<th></th>
<th>Privacy Screen Toggle</th>
<th>OOC</th>
<th>15.5</th>
</tr>
</thead>
<tbody>
<tr>
<td>2D0</td>
<td>Privacy Screen Level Decrement</td>
<td>RTC</td>
<td>15.5</td>
</tr>
<tr>
<td>2D2</td>
<td>Privacy Screen Level Increment</td>
<td>RTC</td>
<td>15.5</td>
</tr>
<tr>
<td>2D3</td>
<td>Privacy Screen Level Minimum</td>
<td>OSC</td>
<td>15.5</td>
</tr>
<tr>
<td>2D4</td>
<td>Privacy Screen Level Maximum</td>
<td>OSC</td>
<td>15.5</td>
</tr>
</tbody>
</table>

2. Add the following text in section 15.5: Display Controls.

Privacy Screen Toggle OOC - Toggles state of privacy screen
Privacy Screen Level Decrement RTC - Decrease level of privacy screen
Privacy Screen Level Increment RTC - Increase level of privacy screen
Privacy Screen Level Minimum OSC - Engage lowest level of privacy screen
Privacy Screen Level Maximum OSC - Engage highest level of privacy screen
Sample Report Descriptor:
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A sample report descriptor for a device which has all of the defined controls.

0x05, 0x0C,            // Usage Page (Consumer)
0x09, 0x01,            // Usage (Consumer Control)
0xAA, 0x01,            // Collection (Application)
0x05, 0x0C,            //   Usage Page (Consumer)
0x15, 0x00,            //   Logical Minimum (0)
0x25, 0x01,            //   Logical Maximum (1)
0x75, 0x01,            //   Report Size (1)
0x0A, 0x00, 0x02,      //   Usage (Privacy Screen Toggle)
0x0A, 0x03, 0x02,      //   Usage (Privacy Screen Level Minimum)
0x0A, 0x04, 0x02,      //   Usage (Privacy Screen Level Maximum)
0x95, 0x03,            //   Report Count (3)
0x81, 0x06,            //   Input (Data, Variable, Relative)
0x0A, 0x01, 0x02,      //   Usage (Privacy Screen Level Decrement)
0x0A, 0x02, 0x02,      //   Usage (Privacy Screen Level Increment)
0x95, 0x02,            //   Report Count (2)
0x81, 0x02,            //   Input (Data, Variable, Absolute)
0xC0                  // End Collection