

Request #: HUTRR116
Title: System Accessibility Binding
Spec Release: 1.5
Requester: Aseda Aboagye
Company: Google Inc

Current Status: **Approved**
Priority: Normal

Required Voter: Microsoft
Required Voter: Logitech
Required Voter: Intel

Voting Begins: 14th May 2024
Voting Ends: 21st May 2024
Voting Result: 7-0

Summary:

Add a new Usage to the Generic Desktop Page (0x01) to support toggling the system bound accessibility UI/command (i.e. invoke system-specific accessibility UI or user-customized accessibility feature).

Background/Scenario:

A user actuates a key (e.g. on a keyboard) to invoke the default system accessibility binding (e.g. launch the system accessibility UI). This key may instead be user-customized to be coupled to (one or more) assistive features such as:

- Screen-magnifier on/off
- Mouse-cursor highlight on/off
- Screen-reader on/off
- Invert display colors

Proposal:

Add/modify to Table 4.1: Generic Desktop Page

Usage Id	Usage Name	Usage Type
0xAA	System Accessibility Binding	OOC

Add to Table 4.5 System Controls

Usage Name	Usage Type	Description
System Accessibility Binding	OOC	<p>Toggle system-wide bound accessibility UI/command. (e.g. if configured to display system accessibility UI, and is visible, dismiss it, and vice-versa).</p> <p>As customized by the system-user, it may instead be coupled to toggle a system-specific assistive feature/s, e.g.:</p> <ul style="list-style-type: none">• Screen-magnifier on/off• Mouse-cursor highlight on/off• Screen-reader on/off• Invert display colors <p><i>Note: The device cannot derive the current UI/command the Usage is bound to, or it's current state (e.g. UI is visible or not), from the lack-of or previous assertion of this Usage or any other Usage (as state may have been toggled by another device, or the user through system UI).</i></p>

Sample Descriptor .wara:

A simple 'System Control' device with a single 'System Accessibility Binding' input item.

Below document authored with *Waratah* (<https://github.com/microsoft/hidtools>)

```
[[usagePage]]
id = 1
name = 'Generic Desktop'

    [[usagePage.usage]]
    id = 0xAA
    name = 'System Accessibility Binding'
    types = ['OOC']

[[applicationCollection]]
usage = ['Generic Desktop', 'System Control']

    [[applicationCollection.inputReport]]

        [[applicationCollection.inputReport.variableItem]]
        usage = ['Generic Desktop', 'System Accessibility Binding']
        logicalValueRange = [0, 1]
        reportFlags = ['data', 'relative', 'preferredstate']
```

Sample Descriptor:

Below document output from above .wara contents

```
0x05, 0x01, // UsagePage(Generic Desktop[0x0001])
0x09, 0x80, // UsageId(System Control[0x0080])
0xA1, 0x01, // Collection(Application)
0x85, 0x01, // ReportId(1)
0x09, 0xAA, // UsageId(System Accessibility Binding[0x00AA])
0x15, 0x00, // LogicalMinimum(0)
0x25, 0x01, // LogicalMaximum(1)
0x95, 0x01, // ReportCount(1)
0x75, 0x01, // ReportSize(1)
0x81, 0x06, // Input(Data, Variable, Relative, NoWrap, Linear, PreferredState,
NoNullPosition, BitField)
0x75, 0x07, // ReportSize(7)
0x81, 0x03, // Input(Constant, Variable, Absolute, NoWrap, Linear, PreferredState,
NoNullPosition, BitField)
0xC0, // EndCollection()
```