Request #:   HUTRR88
Title: New Digitizer Usages for Touchpads
Spec Release: 1.12
Requester: Nathan Sherman
Company: Microsoft
Phone:
Email: nathans@microsoft.com

Pages Affected: Digitizers 0x0D
Values checked: Yes, by Chair

Current Status: Approved

Required Voter: Microsoft
Required Voter: Intel
Required Voter: Wacom

Received: 01 Oct 2018
Voting Begins: 25 Oct 2018
Voting Ends: 01 Nov 2018
Voting Result: Approved 5-0-0
Approved Date: 02 Nov 2018

Request #:   HUTRR83
Title: New Digitizer Usages for Touchpads
Spec Release: 1.12
Received:
Requester: David Abzarian
Company: Microsoft Corporation
Phone: 425-707-7169
FAX:
email:

Summary:

Add usages to the digitizer page to better support touch and touchpad
digitizers. These usages enable touchpads to describe their click type,
allow hosts to configure them for low-power modes of reporting, and describe
how touchpads report their sense of time in every frame.

Background:

For more information on Microsoft's implementation, commonly known as Precision
Touchpad, please see:
https://docs.microsoft.com/en-us/windows-hardware/design/component-guidelines/windo
ws-precision-touchpad-implementation-guide

Proposal:

This HUTRR assigns usage 0x000D:0x00060 which was also proposed in HUTRR76.
HUTRR76 has been changed to avoid using 0x000D:0x0060.

Page: "16 Digitizers (0x0D)"

56	Scan Time	DV
57	Surface Switch	DF
58	Button Switch	DF
59	Pad Type	SF
60	Latency Mode	DF

Usage 56 (Scan Time):
For each frame reported, the digitizer shall report a timestamp in relative
time. The units are in 100 microseconds by default. The first scan time
received is treated as a base time for subsequent reported times. This value
represents the time difference from the first frame that was reported after
a device starts reporting data subsequent to a period of inactivity. The
time differences between reported scan times should reflect the scanning
frequency of the digitizer. The scan time value should be the same for all
contacts within a frame.

Usage 57 (Surface Switch):
To allow for better power management, a host may wish to indicate what it
would like a touchpad digitizer to not report surface digitizer contacts by
clearing this
flag. By default, upon cold-boot/power cycle, touchpads that support reporting
surface
contacts shall do so by default.

Usage 58 (Button Switch):
To allow for better power management, a host may wish to indicate what it
would like a touchpad digitizer to not report button state changes by clearing this

flag. By default, upon cold-boot/power cycle, touchpads that support reporting
button state
shall do so by default.

Usage 59 (Pad type):
A touchpad digitizer may be physically depressible (often referred to as a
click-pad) or it may not (often referred to as a pressure-pad). This usage
allows the device to identify its pad type to the host. When set, the touchpad
is non-depressible (pressure-pad); when clear, the touchpad is depressible
(click-pad).

Usage 60 (Latency Mode):

The host may indicate to the input device when high latency is desirable for power savings by setting this flag and normal latency mode when clear. By default, upon cold-boot/power cycle, digitizers shall report with normal latency.

Response:

<Added by HID Chair upon closing the Request>

Notes on Approval Procedure:

HID WG On Line Voting Procedures

1. Votes are on a per company basis.

2. Each Review Request shall have attached a Required Voter List that is the result of recruiting by the HID Chair and submitter of members of the USB IF. Required Voter List must include the HID Chair plus 2 companies (other than the submitter) plus any others designated by the HID Chair at the Chair's discretion. The Required Voter List ensures that a quorum is available to approve the Request.

3. Impose a 7-calendar-day posting time limit for new Review Requests. HID Chair or designate must post the RR within 7 calendar days. HID Chair or designate must work with the submitter to make sure the request is valid prior to posting. Valid review request must include all fields marked as required in the template. A new template will be adopted that requires at least the following fields: Change Text, Required Voter List, Review Period End Date and Voting End Date, Submittal Date, Submitter, Review Request Title and RR Number.

4. If a RR approval process stalls, the HID Chair may call a face-to-face meeting or conference call to decide the issue. Submitter may request that this take place.

5. Impose a minimum 15-calendar-day review period on a posted RR prior to the voting period. At HID Chair discretion, changes to the RR may require this review period to restart.

6. The Chair will accept votes via documentable means such as mail or e-mail during the 7 calendar days after the close of the review period. If a Required Voter does not vote during the period, then there is no quorum and the Chair may pursue the absent required voter and extend the voting period. The Chair may designate a substitute for the absent voter and extend the voting period if necessary.