TECH BULLETIN

CONTACTS:

Brad Saunders
USB 3.0 Promoter Group
+1 503-264-0817
brad.saunders@intel.com

Liz Nardozza
USB-IF PR
+1 503-619-5224
press@usb.org

USB 3.0 Promoter Group Announces Power and Device Class Specifications to Support Development of USB Type-C Ecosystem

USB Power Delivery v2.0 and USB Billboard Device Class v1.0 specifications enable USB Type-C Alternate Modes

Beaverton, OR. – September 9, 2014 – The USB 3.0 Promoter Group today announced the release of the USB Power Delivery v2.0 and USB Billboard Device Class v1.0 specifications. These specifications are available for download from the USB-IF website http://www.usb.org/developers/docs.

The USB Type-C specification defines Functional Extensions that enable USB Type-C hosts and devices to support optional capabilities. The Functional Extensions include Alternate Modes, an option that permits a vendor or standards organization to utilize the USB Type-C cable and connector and provide additional features. Vendors or standards organizations that develop USB Type-C Alt Modes will be required to obtain a standard or vendor ID (SVID) assigned by the USB Implementers Forum (USB-IF). Both the USB Power Delivery v2.0 and the USB Billboard Device Class v1.0 specifications are essential for the development and implementation of Alternate Modes.

"To support the recent release of the USB Type-C specification, we are educating everyone in the industry from OEMs to consumers about all of the possibilities USB Type-C offers," said Jeff Ravencraft, USB-IF President and COO. "These new specifications provide necessary resources for the development of USB Type-C Alt Modes. The USB-IF is also in the process of defining joint identification guidelines to ensure consumers can easily recognize what capabilities a USB Type-C capable host or device supports."

USB Power Delivery v2.0 Specification

The USB Power Delivery (PD) v2.0 specification updates the USB PD v1.0 specification to meet the requirements of the USB Type-C specification and to incorporate additional changes. If a USB Type-C host or device supports Alternate Modes, the host and device will use USB Power Delivery Structured Vendor Defined Messages (Structured VDMs) to discover, configure and enter/exit Alternate Modes. The USB Power Delivery Structured VDMs are defined to extend the functionality a device exposes. Only Structured VDMs shall be used to alter the USB functionality or reconfigure the pins the USB Type-C connector exposes. Structured VDMs provide a standard method to identify the Alternate Modes a device supports and to command the device to enter and exit an Alternate Mode. The use of Structured VDMs are in addition to the normal USB PD messages used to manage power. Multiple Alternate Modes may exist and/or function concurrently.

USB Billboard Device Class Specification

The USB Billboard Device Class specification outlines the methods used to communicate if an Alternate Mode is supported by a USB Type-C capable host or device. In particular, if a device fails to successfully enter an Alternate Mode then the device will minimally expose a USB 2.0 Billboard interface powered by VBUS.

About the USB 3.0 Promoter Group
The USB 3.0 Promoter Group, comprised of Hewlett-Packard Company, Intel Corporation, Microsoft Corporation, Renesas Electronics, STMicroelectronics and Texas Instruments, developed the USB 3.1 Specification that was released in July 2013. In addition to maintaining and enhancing this specification, the USB 3.0 Promoter Group develops specification addendums to extend or adapt its specifications to support more platform types or use cases where adopting USB 3.1 technology will be beneficial in delivering a more ubiquitous, richer user experience.

About the USB-IF
The non-profit USB Implementers Forum, Inc. was formed to provide a support organization and forum for the advancement and adoption of USB technology as defined in the USB specifications. The USB-IF facilitates the development of high-quality compatible USB devices through its logo and compliance program, and promotes the benefits of USB and the quality of products that have passed compliance testing. Further information, including postings of the most recent product and technology announcements, is available by visiting the USB-IF website at www.usb.org.

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