USB PD CTS ENGINEERING CHANGE NOTICE FORM

NOTICE: Any Company or Companies submitting a USB Power Delivery ECR proposal must be one of the following: a Promoter or Contributor of the USB 3.0 and 2.0 Specifications who have completed the USB Power Delivery addendum. If a group of Companies is submitting an ECR proposal, each company must be either a Promoter or Contributor of the USB 3.0 and 2.0 Specifications who have completed the USB Power Delivery addendum.

SPECIFICATION REVISIONS AND ADDENDA: At any point in time, there shall only be one current version of the USB PD CTS, termed the production version. At the same time, there may also be proposed revisions to the specification's design which are not yet approved and shall be held confidential as deemed necessary by the USB 3.0 and USB 2.0 Promoters and within the Group of Working Committee(s).

PROCEDURES FOR SUBMITTING PROPOSALS: Both members of the USB Implementers Forum as a whole and members of the USB 3.0 and USB 2.0 Promoters may submit requests to revise the USB PD CTS Specification. Such a request may be rejected or may result in a USB PD Engineering Change Notice (ECN), which is the official way USB specifications may be changed.

FORMAT OF PROPOSAL: The originator of a request to alter the USB PD CTS Specification may do so by posting this to the USB Power Delivery Compliance working group for review. Once the proposal has been reviewed by the working group it will be passed to the USB 3.0 and 2.0 Promoters for approval to publish.

RESUBMISSION AND APPEAL: The originator of a request that was not approved can redraft the original request. Rewritten proposal will be treated as a new proposal and will be evaluated using the procedures described above. The originator of a request that was not approved can also submit an appeal to the USB 3.0 and 2.0 Promoters. The appeal must be made in writing and addressed to the Secretary of the USB Implementers Forum.

ABOUT THE ENGINEERING CHANGE REQUEST FORM:
The Purpose of this Engineering Change Request Form is to expedite the review process of the proposal by providing explanations, background information, and examples of the proposed changes at a high level. This form serves as an executive summary to the actual proposal.

STEPS ON HOW TO SUBMIT A USB PD ENGINEERING CHANGE REQUEST:

1) Please fill out the Engineering Change Request Form on the following pages completely:
   a) Detail the names and contact details for each of the ECR contributors
   b) Update the ECR Title
   c) Give a minimum of 2-3 sentences for each description on the form outlining the background to the ECR
2) For each section/table/figure to be updated:
   a) Detail the section number, starting page and figure/table number to be updated as appropriate.
   b) Detail existing text under "From Text"
   c) Detail changed text under "To Text"
3) Save the file as "USB PD CTS 1.0 R 1" followed by the ECR Title as per step 1)b)
4) Post the ECR in the USB PD CTS Documents section under "ECR | New ECRs".
   a) This ECR will then be reviewed by the Power Delivery Compliance Working Group.
   b) Revisions to the ECR originating from the review should be submitted as document revision of the original ECR using "Add new document".

USB PD CTS ENGINEERING CHANGE NOTICE FORM

Name: Sten Carlsen Email: carlsen@mqp.com
Company: MQP Mailstop: _____
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City: _____ State/Province: _____
Country: _____ Zip/Postal Code: _____
Phone: _____ FAX: _____

Name: _____ Email: _____
Company: _____ Mailstop: _____
Address: _____
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Company: _____ Mailstop: _____
Address: _____
City: _____ State/Province: _____
Country: _____ Zip/Postal Code: _____
Phone: _____ FAX: _____

USB PD CTS ENGINEERING CHANGE NOTICE FORM

Title: xxxx
Applied to: USB PD CTS Specification Version 1.0 Revision 1

Brief description of the functional changes proposed:
In the current CTS the testers use their own VendorID and ProductID. This ECR proposes to use a common set of VendorID and ProductID which is built on the one used in the OTG spec, only with different ProductIDs. It is also proposed to specify the same version information for all testers.

Benefits as a result of the proposed changes:
All testers will present the same and consistent data to the UUT.

An assessment of the impact to the existing revision and systems that currently conform to the USB specification:
None

An analysis of the hardware implications:
None

An analysis of the software implications:
None

An analysis of the compliance testing implications:
Change the actual data put into the packets in a few places.

An analysis of the Vendor Info File (VIF) implications:
None

USB PD CTS ENGINEERING CHANGE NOTICE FORM

Actual Change Requested

(a). New section after: 1.4.8 Reporting When Test Cannot be Completed. - Could maybe also be an Appendix?

Add Text:

Vendor ID and Product IDs used in testing.

The VID is 0x1A0A, this VID is used in multiple specs for testing. The PIDs presented by the PID/VID corresponds with the following test modes.

Table x Product IDs used in testing.

PID	Test Mode	Used in
0x0101	TEST_SEO_NAK	Electrical testing
0x0102	TEST_J	Electrical testing
0x0103	TEST_K	Electrical testing
0x0104	TEST_PACKET	Electrical testing
0x0105	RESERVED	Electrical testing
0x0106	HS_HOST_PORT_SUSPEND_RESUME	Electrical testing
0x0107	SINGLE_STEP_GET_DEV_DESC	Electrical testing
0x0108	SINGLE_STEP_SET_FEATURE	Electrical testing
0x0200	TTST_CONFIG	OTG
0x0201	Unknown Device Not Supporting HNP	OTG
0x0202	Unknown Device Supporting HNP	OTG
0x0301	Cable	PD
0x0302	Source/Sink	PD

(b). COMMON.PROC.PD.7 UUT Sent Discover Identity Request

From Text:

i. ID Header VDO

1. B31 (USB Communications Capable as USB Host) set to 0b.
2. B30 (USB Communications Capable as a USB Device) set to 0b.
3. B29…27 (SOP' Product Type) set to 011b (Passive Cable)
4. B26 (Modal Operation Supported) set to 0b.
5. B25…23 (Reserved) set to 000b.
6. B22…21 (Connector Type) set to 11b (USB Type-C® Plug)

7. B20…16 (Reserved) set to 00000b.
8. B15…0 (USB Vendor ID) set to the Vendor ID of the Tester

ii. Cert Stat VDO

B31..0(XID) set to 0

iii. Product VDO
1. B31..16 (USB Product ID) set to the Product ID of the Tester
2. B15..0 (bcdDevice) set to 0

iv. Passive Cable VDO
1. B31…28 (HW Version) set to 0000b.
2. B27…24 (FW Version) set to 0000b.

To Text:

i. ID Header VDO
1. B31 (USB Communications Capable as USB Host) set to 0b.
2. B30 (USB Communications Capable as a USB Device) set to 0b.
3. B29…27 (SOP' Product Type) set to 011b (Passive Cable)
4. B26 (Modal Operation Supported) set to 0b.
5. B25…23 (Reserved) set to 000b.
6. B22…21 (Connector Type) set to 11b (USB Type-C® Plug)
7. B20…16 (Reserved) set to 00000b.
8. B15…0 (USB Vendor ID) set to 0x1A0A

ii. Cert Stat VDO

B31..0(XID) set to 0

iii. Product VDO
1. B31..16 (USB Product ID) set to 0x0301
2. B15..0 (bcdDevice) set to 0

iv. Passive Cable VDO
1. B31…28 (HW Version) set to 0000b.
2. B27…24 (FW Version) set to 0000b.

(c). Table 16

From Text:

Table 1 Sink Capabilities Extended Message

Field	Description
VID	Vednor ID of Tester
PID	Product ID of Tester
XID	0
FW Version	At Tester Vendor's Discretion
HW Version	At Tester Vendor's Discretion
SKEDB Version	1

To Text:

Table 2 Sink Capabilities Extended Message

Field	Description
VID	0x1A0A
PID	0x0302
XID	0
FW Version	0
HW Version	0
SKEDB Version	1

(d). Table 17

From Text:

Table 3 Sink_Capabilities_Extended Message

Field	Description
VID	Vendor ID of Tester
PID	Product ID of Tester
XID	0
FW Version	At Tester Vendor's Discretion
HW Version	At Tester Vendor's Discretion
SKEDB Version	1

To Text:

Table 4 Sink_Capabilities_Extended Message

Field	Description
VID	0x1A0A
PID	0x0302
XID	0
FW Version	0
HW Version	0
SKEDB Version	1

(e). TEST.PD.USB4.EUSB.3

From Text:

TEST.PD.USB4.EUSB.3 – Enter_USB Flow-USB4 DFP Connected to USB4 UFP using an Active Cable

Description: The Tester verifies the *Enter_USB* flow of USB4 Capable DFP UUT when it is connected to a USB4 capable UFP using a USB4 Capable Active cable.

…

- On the SOP'
  - ID header VDO-> Product Type UFP: Active Cable, Connector Type: USB TypeC plug, Modal operation supported = No, USB VendorID= Tester Vendor ID. All other values are 0.

To Text:

TEST.PD.USB4.EUSB.3 – Enter_USB Flow-USB4 DFP Connected to USB4 UFP using an Active Cable

Description: The Tester verifies the *Enter_USB* flow of USB4 Capable DFP UUT when it is connected to a USB4 capable UFP using a USB4 Capable Active cable.

…

- On the SOP'
  - ID header VDO-> Product Type UFP: Active Cable, Connector Type: USB TypeC plug, Modal operation supported = No, USB VendorID= 0x1A0A. USB ProductID=0x0301. All other values are 0.

(f). TEST.PD.USB4.EUSB.5

From Text:

Description: The UUT as USB4 DFP Shall wait *tEnterUSBWait* after receiving the *Wait* Message to *Enter_USB* Message before sending another the *Enter_USB* Message.

…

o on the SOP'

- ID header VDO

Product Type UFP: Passive Cable,
Connector Type: USB TypeC plug,
Modal operation supported = No,
USB VendorID = Tester Vendor ID,
All other values are 0

To Text:

Description: The UUT as USB4 DFP Shall wait *tEnterUSBWait* after receiving the *Wait* Message to *Enter_USB* Message before sending another the *Enter_USB* Message.

…

o on the SOP'

- ID header VDO

Product Type UFP: Passive Cable,
Connector Type: USB TypeC plug,
Modal operation supported = No,
USB VendorID = 0x1A0A,
All other values are 0