

USB Power Delivery ENGINEERING CHANGE NOTICE

Title: Message Discard Logic Clarification

**Applied to: USB Power Delivery Specification Revision 3.0
Version 2.0**

Brief description of the functional changes proposed:
Under some circumstances involving receipt and transmission of messages it is possible, with the state machines as described, for both transmit and receive chunking machines to be simultaneously in use, which was never intended. This ECN makes an adjustment to the Message Discard table to prevent this from occurring. It needs to be made clear that when there is a choice to be made between incoming and outgoing message, one of them must be discarded (and not just the outgoing message as is described at present).

Benefits as a result of the proposed changes:
Eliminates the need to work around the issue.

An assessment of the impact to the existing revision and systems that currently conform to the USB specification:
Should be none as most developers will have implemented a work-around

An analysis of the hardware implications:
None

An analysis of the software implications:
Should be none as most developers will have implemented a work-around

An analysis of the compliance testing implications:
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None

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Actual Change Requested

(a). Section 6.10

From Text:

Table 6-67 Message discarding

Message pending transmission	Message received	Discard pending transmission?
SOP	SOP	Yes
SOP	SOP'/SOP''	No
SOP'	SOP	Yes
SOP'	SOP'	No
SOP'	SOP''	No
SOP''	SOP	Yes
SOP''	SOP'	No
SOP''	SOP''	No

To Text:

Table 6-67 Message discarding

Message pending transmission	Message received	Message to be discarded
SOP	SOP	Outgoing message
SOP	SOP'/SOP''	Incoming message
SOP'	SOP	Outgoing message
SOP'	SOP'	Incoming message
SOP'	SOP''	Incoming message
SOP''	SOP	Outgoing message
SOP''	SOP'	Incoming message
SOP''	SOP''	Incoming message

(b). Section 6.11.2.3

In Figure 6-57 , state PRL_Rx_Store_MessageID

From Text:

Pass message to Policy Engine

To Text:

Pass message to Policy Engine³

(c). Section 6.11.2.3

In Figure 6-57 , state PRL_Rx_Store_MessageID

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After notes 1 and 2, add:

³ See Section 6.10 for details of when messages are discarded