

USB Power Delivery ENGINEERING CHANGE NOTICE

Title: USB PD R3.2 V1.0 – EPR Request in SPR Mode
Applied to: USB Power Delivery Specification Revision 3.2
Version 1.0

Brief description of the functional changes proposed:
This ECN explicitly states that a Source should initiate a HardReset sequence if Sink sends it an EPR_Request message while in the SPR mode of operation

Benefits as a result of the proposed changes:
Clarification of specification to meet compliance testing

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:
In not already done, the PD controllers will have to be updated to implement new behavior

An analysis of the compliance testing implications:
Compliance tester (Ellisys) already this behavior from DUT

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Actual Change Requested

(a) Section 6.4.9 EPR_Request Message, Page 220

From Text:

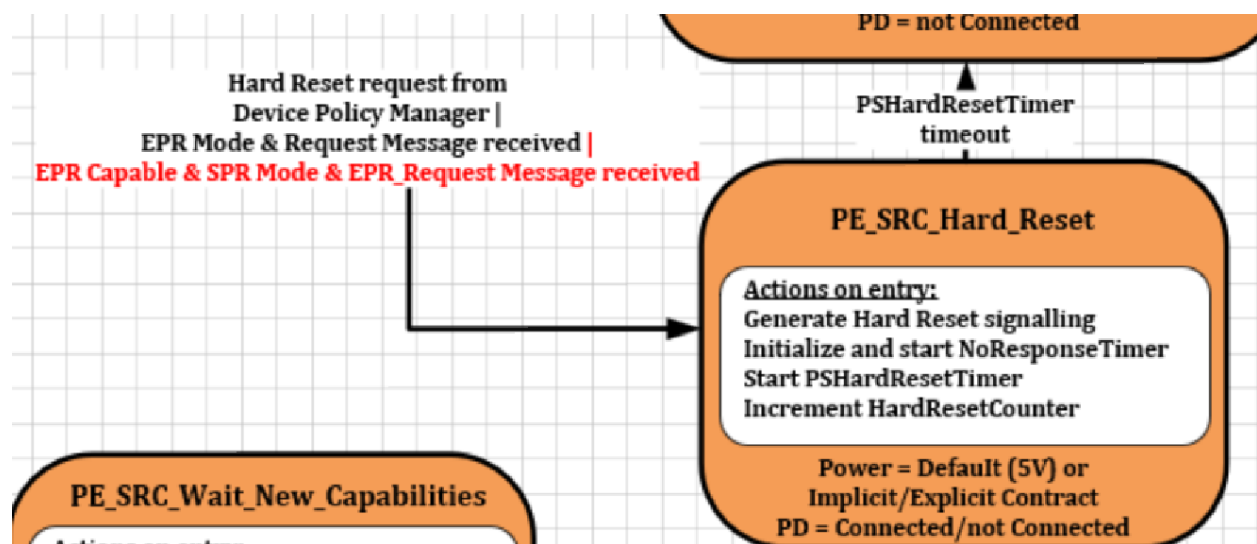
The Source *Shall* respond to an *EPR_Request* Message in the same manner as it responds to a *Request* Message with an *Accept* Message, or a *Reject* Message (see *Section 6.9 “Accept, Reject and Wait”*). A Sink receiving a *Wait* response *Shall* initiate a Hard Reset. The Explicit Contract Negotiation process for EPR is the same as the process for SPR Mode except that the *Source_Capabilities* Message is replaced by the *EPR_Source_Capabilities* and the *Request* message is replaced by the *EPR_Request* message.

To Text:

The Source *Shall* respond to an *EPR_Request* Message in the same manner as it responds to a *Request* Message with an *Accept* Message, or a *Reject* Message (see *Section 6.9 “Accept, Reject and Wait”*). A Sink receiving a *Wait* response *Shall* initiate a Hard Reset. The Explicit Contract Negotiation process for EPR is the same as the process for SPR Mode except that the *Source_Capabilities* Message is replaced by the *EPR_Source_Capabilities* and the *Request* message is replaced by the *EPR_Request* message.

An EPR Source operating in SPR Mode that receives a *EPR_Request* Message *Shall* initiate a Hard Reset.

(b) Section 8.3.3.2 Policy Engine Source Port State Diagram, page 867



From Text:

The text in transition diagram: Hard Reset request from Device Policy Manager | EPR Mode & Request Message received

To Text:

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The text in transition diagram: Hard Reset request from Device Policy Manager | EPR Mode & Request Message received | EPR Capable & SPR Mode & EPR_Request received

(c) Section 8.3.3.2.9PE_SRC_HARD_Reset State, page 873

From Text:

The Policy Engine **Shall** transition to the *Error! Reference source not found.* state from any state when:

- *Hard Reset* request from *Device Policy Manager* or
- In *EPR Mode* and
- A **Request** Message is received.

To Text:

The Policy Engine **Shall** transition to the *Error! Reference source not found.* state from any state when:

- *Hard Reset* request from *Device Policy Manager* or
- In *EPR Mode* and a **Request** Message is received or
- Source is EPR Capable and in *SPR Mode* and an **EPR_Request** Message is received.