

# USB Power Delivery ENGINEERING CHANGE NOTICE

**Title: Correcting Invalid Reject Message Handling**  
**Applied to: USB Power Delivery Specification Revision 3.1**  
**Version 1.6**

<b>Brief description of the functional changes proposed:</b>
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Reject Message Received response to be removed for Data_Reset and Get_Source_Cap.
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<b>Benefits as a result of the proposed changes:</b>
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Reject Message is not a valid response to Data_Reset, that would constitute a protocol error. Same is also true for Get_Source_Cap.
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<b>An assessment of the impact to the existing revision and systems that currently conform to the USB specification:</b>
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Minimal impact
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<b>An analysis of the hardware implications:</b>
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None
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<b>An analysis of the software implications:</b>
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For Data_Reset, receiving any message other than Accept will trigger ErrorRecovery. For Get_Source_Cap, receiving any message other than an expected/valid response will trigger Soft_Reset.
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<b>An analysis of the compliance testing implications:</b>
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Reject Message Received is not applicable response to the Data_Reset & Get_Source_Cap message so compliance will need an update to flag them.
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## Actual Change Requested

### (a). Section 6.3.14 “Data\_Reset Message”, P.127

#### From Text:

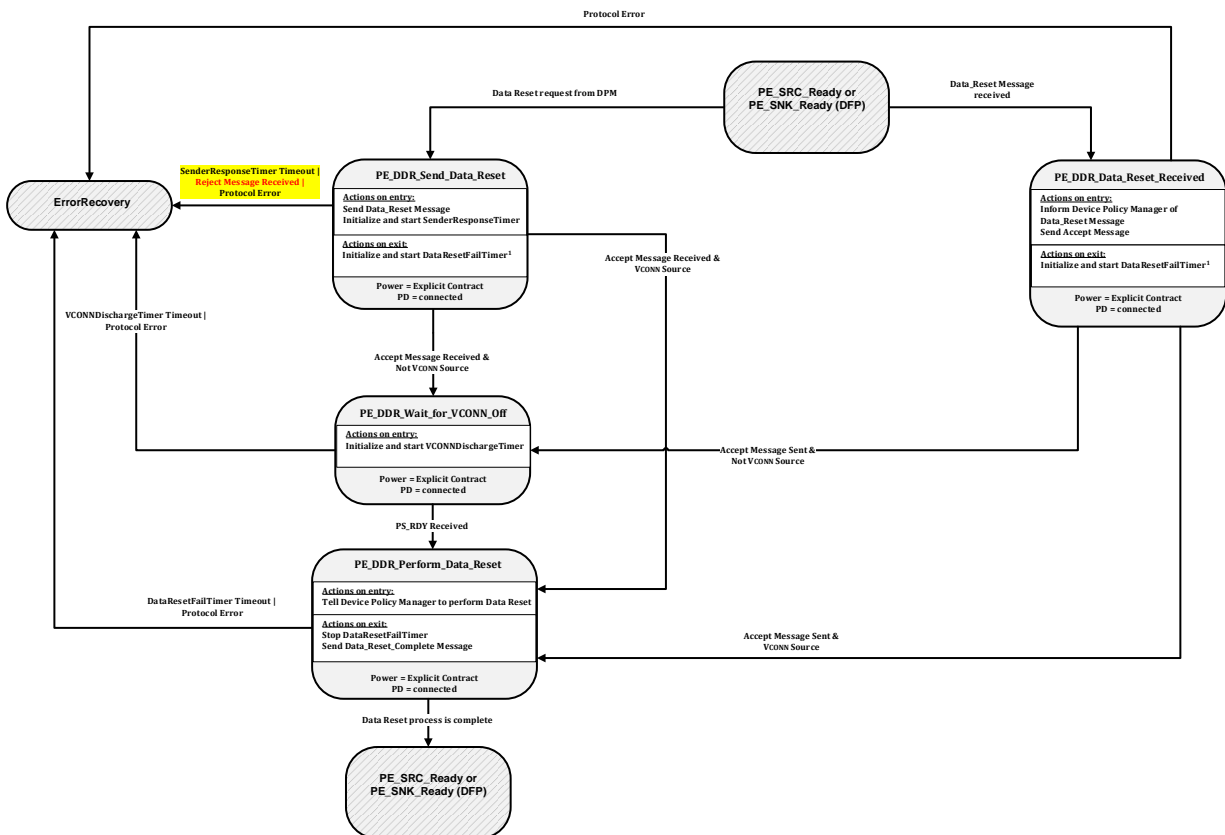
If the initiator of the Data\_Reset Message does not receive the *Accept* Message within *tSenderResponse* it Shall enter *ErrorRecovery* State.

#### To Text:

If the initiator of the *Data\_Reset* Message does not receive a *Valid response* within *tSenderResponse* it *Shall* enter the *ErrorRecovery* State.

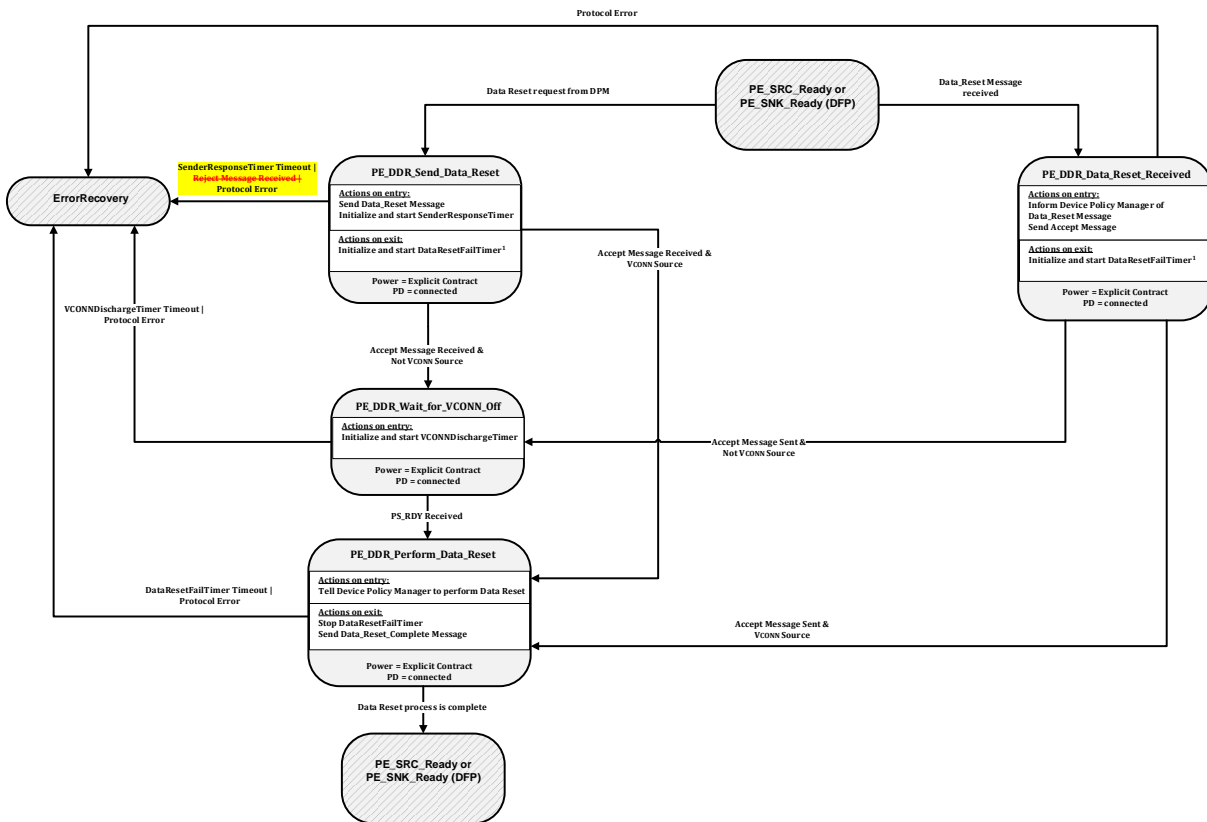
### (b). Section 8.3.3.5.1 “DFP Data\_Reset Message State Diagrams”, Figure 8-138 “DFP Data\_Reset Message State Diagram”, P.698

#### From Text:



#### To Text:

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Remove "Reject Message received"

## (c). Section 8.3.3.5.1.1 "8.3.3.5.1.1 PE\_DDR\_Send\_Data\_Reset State", P.698

### From Text:

The Policy Engine Shall transition to ErrorRecovery when:

- The SenderResponseTimer timeout occurs or
- A Reject Message is received or
- A Protocol Error occurs.

### To Text:

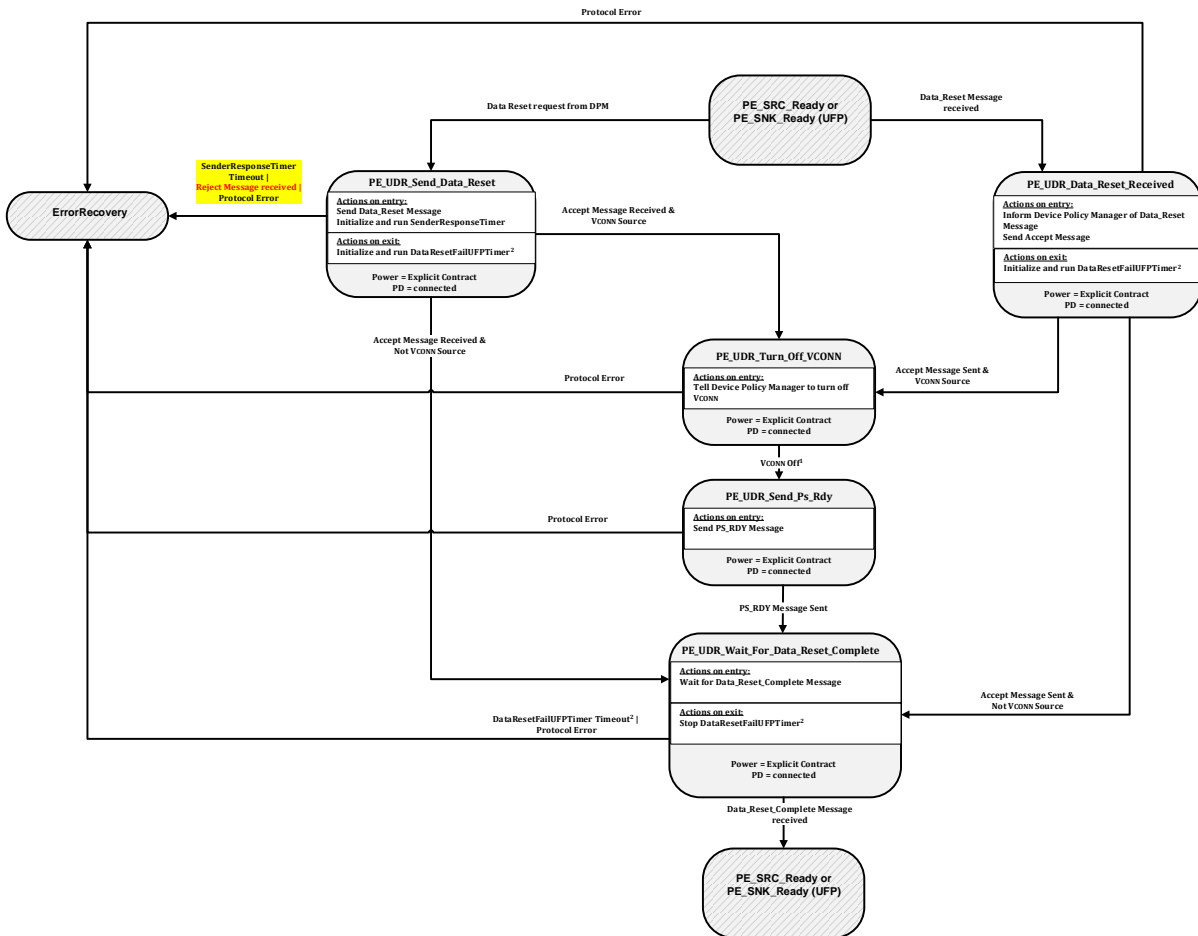
The Policy Engine Shall transition to ErrorRecovery when:

- The SenderResponseTimer timeout occurs or
- ~~A Reject Message is received or~~
- A Protocol Error occurs.

## (d). Section 8.3.3.5.2 "UFP Data\_Reset Message State Diagrams", Figure 8-139 "UFP Data\_Reset Message State Diagram", P.700

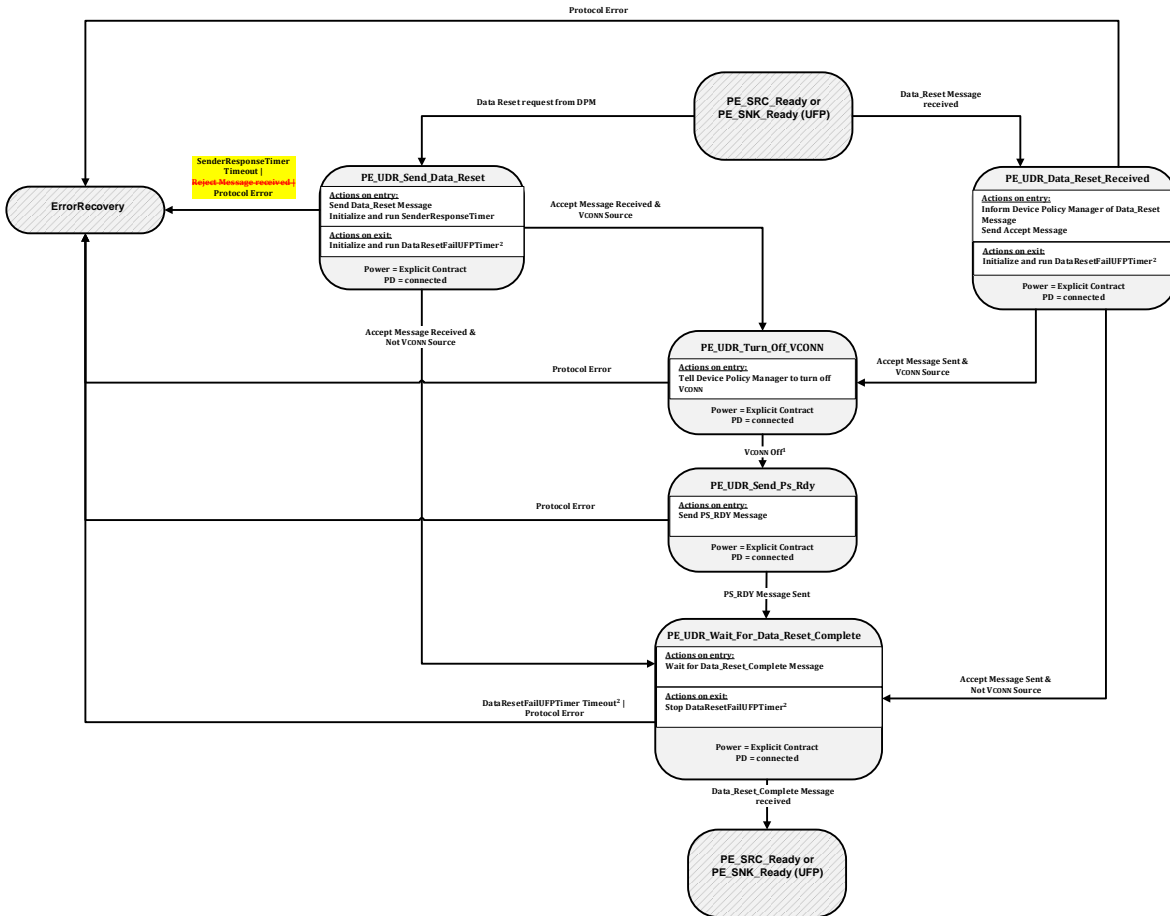
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From Text:



To Text:

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## (e). Section 8.3.3.5.2.1 “PE\_UDR\_Send\_Data\_Reset State”, P.700

### From Text:

The Policy Engine Shall transition to ErrorRecovery when:

- The SenderResponseTimer has timed out or
- A Reject Message has been received or
- A Protocol Error occurs.

### To Text:

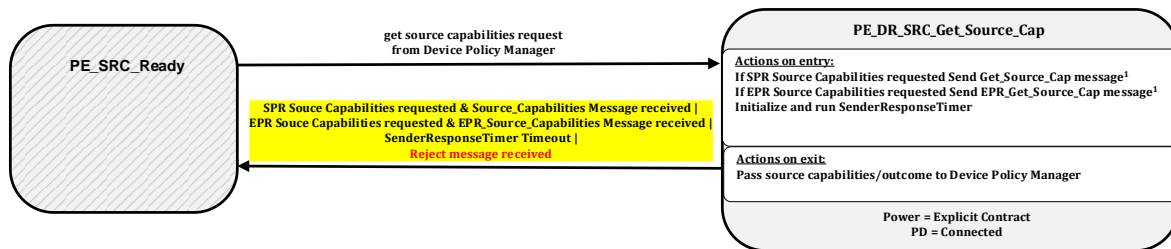
The Policy Engine Shall transition to ErrorRecovery when:

- The SenderResponseTimer has timed out or
- ~~A Reject Message has been received or~~
- A Protocol Error occurs.

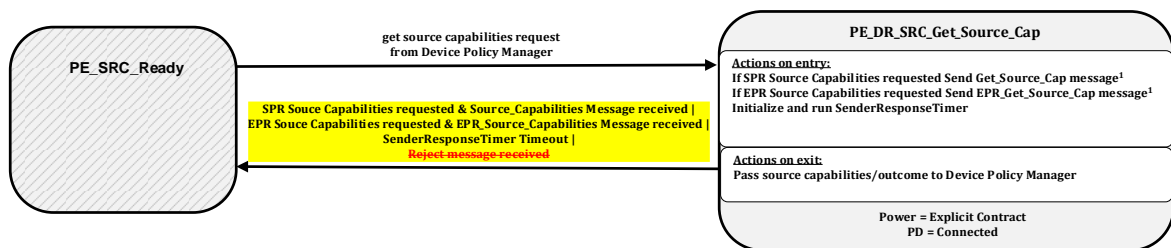
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(f). Section 8.3.3.20.7 “8.3.3.20.7 Dual-Role (Source Port) Get Source Capabilities State Diagram”, Figure 8-183 “Dual-Role (Source) Get Source Capabilities diagram”, P.740

From Text:



To Text:



(g). Section 8.3.3.20.7.1” 8.3.3.20.7.1 PE\_DR\_SRC\_Get\_Source\_Cap State”, P.740

From Text:

The Policy Engine Shall transition back to the PE\_SRC\_Ready State (see Figure 8-84) when:

- In SPR Mode and SPR Source Capabilities were requested and a Source\_Capabilities Message is received or
- In EPR Mode and EPR Source Capabilities were requested and an EPR\_Source\_Capabilities Message is received or
- The SenderResponseTimer times out.
- Or a Reject Message is received.

To Text:

The Policy Engine Shall transition back to the PE\_SRC\_Ready State (see Figure 8-84) when:

- In SPR Mode and SPR Source Capabilities were requested and a Source\_Capabilities Message is received or
- In EPR Mode and EPR Source Capabilities were requested and an EPR\_Source\_Capabilities Message is received or
- The SenderResponseTimer times out.
- ~~Or a Reject Message is received.~~

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## Background info:

The *Reject* Message is a *Valid* response in the following cases:

- It *Shall* be sent to signal the Sink, in SPR Mode, that the Source is unable to meet the *Request* Message. This *May* be due an *Invalid* request or because the Source can no longer provide what it previously Advertised.
- It *Shall* be sent to signal the Sink, in EPR Mode, that the Source is unable to meet the *EPR\_Request* Message. This *May* be due an *Invalid* request or because the Source can no longer provide what it previously Advertised.
- It *Shall* be sent by the recipient of a *PR\_Swap* Message to indicate it is unable to do a Power Role Swap.
- It *Shall* be sent by the recipient of a *DR\_Swap* Message to indicate it is unable to do a Data Role Swap.
- It *Shall* be sent by the recipient of a *VCONN\_Swap* Message that is not presently the VCONN Source, to indicate it is unable to do a VCONN Swap.
- It *Shall* be sent by UFP on receiving an *Enter\_USB* Message to indicate it is unable to enter the requested USB Mode.