

USB 3.1 ENGINEERING CHANGE NOTICE FORM

Title: Loopback BERT

Applied to: USB 3.1 Specification Release

Brief description of the functional changes:
Clarify that BERT commands are not used in Gen 2 operation. Make BERT commands optional in Gen 1 operation.

Benefits as a result of the changes:
Eliminate any potential confusion for Gen 2 operation.
For Gen 1 operation the BERT command processing was put into the original specification for use in compliance testing. However, the compliance environment was constructed so as to neither need nor use this feature. Making it optional allows vendors to remove a bit of complexity from their PHYs.

An assessment of the impact to the existing revision and systems that currently conform to the USB specification:
No impact to Gen 2 operation, it only clarifies what is already in the spec. For Gen 1 it is a reduction of an unused feature.

An analysis of the hardware implications:
No hardware implications for Gen 2. For Gen 1 PHYs may have a slight reduction in complexity by not including BERT command processing.

An analysis of the software implications:
No software implications

An analysis of the compliance testing implications:
No compliance testing implications. This feature was never used for compliance testing.

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Actual Change

(a). From, in section 6.8.4

During loopback the receiver shall process the Bit Error Rate Test (BERT) commands.

(a). To, in section 6.8.4

During Gen 1 loopback the receiver **may** process the Bit Error Rate Test (BERT) commands. The processing of BERT commands is optional for Gen 1 loopback. There are no BERT commands in Gen 2 operation.