USB 3.1 ENGINEERING CHANGE NOTICE

Title: TSEQ SKP Insertion Interval
Applied to: USB 3.1 Specification Release

Brief description of the functional changes:
Define the interval between SKP OS insertions during Pp~~o~~lling.Rx~~T~~SEQ for Gen 2 operation. In the present document the insertion of SKP OS is present, but the insertion period was not specified.

Benefits as a result of the changes:
Make sure that SKPs are not inserted too often since they are not scrambled and affect the randomness of the incoming data. The randomness of the data is important for successful receiver adaptation.

An assessment of the impact to the existing revision and systems that currently conform to the USB specification:
If someone has a non-programmable SKP insertion interval during Pp~~o~~lling.Rx~~T~~SEQ that is other than 128 they would need to change the state machine that counts cycles between SKP OS insertions.

An analysis of the hardware implications:
Minor change to one state machine.

An analysis of the software implications:
No impact

An analysis of the compliance testing implications:
No impact.

Actual Change

In section 6.~~1~~8.1

From Text:

Due to the length of the Gen 2 training interval and the potential desire to examine the data, SKPs are inserted during polling.TSEQ.

To Text:

Due to the length of the Gen 2 training interval and the potential desire to examine the data, SKPs are inserted during ~~p~~Polling.~~TS~~RxEQ. A port shall transmit a SKP OS once every 128 TSEQ OS. The longer interval between SKP OS helps preserve the richness of the data while training the receiver.