

**Proposed
Draft**

**Serial ATA
International Organization**

**Version 2
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**Serial ATA Revision 3.2 ECN076
Title : Flow control**

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Document History

| Version | Date | Comments |
|---------|------------------|---------------------------------------|
| 0 | January 7, 2014 | Initial release. |
| 1 | January 8, 2014 | Fixed subscript P |
| 2 | January 27, 2014 | Member review, D176 changed to ECN076 |
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1 Introduction

1.1 Problem Statement

The 6 Gbit/s transmitter requirement to respond within 20 Dwords for HOLD_P/HOLDA_P turn around time was incorrectly changed due to a member review comment. When this comment was reviewed by the Digital work group it was determined that the value was correct. The value was improperly changed in the release of SATA rev 3.2.

1.2 Solution Summary

Change the transmitter requirement to respond within 20 Dwords back to the way it was in SATA rev 3.1.

1.3 Background (optional)

TPR019 HOLD_P/HOLDA_P Protocol Change for 6G SATA introduced a receiver requirement to accommodate reception of 24 Dwords while maintaining a transmitter requirement to respond within 20 Dwords. There was an intentional difference between transmitter and receiver requirements to account for the propagation delay of the cable.

During the SATA rev 3.1 to SATA rev 3.2 review there was a comment to change the 20 Dword value to 24 Dwords. When this comment was discussed in the Digital group the 20 Dword number was identified as correct and no change should have been applied. Unfortunately the working draft was modified and the SATA rev 3.2 was released with an unintended change.

2 Technical Specification Changes

2.1 <Title of section being changed >

[editor note: Existing text is black. New text is marked as underlined in blue color. Material to be deleted ~~is red with strikethrough markings.~~]

2.2 <9.4.9.1> Flow control signaling latency overview

If operating at Gen3 transfer speeds, a receiver shall be able to accommodate reception of 24 Dwords of additional data after the time it transmits HOLD_P to the transmitter, and the transmitter shall respond with HOLDA_P in response to receiving a HOLD_P within 2420 Dwords. The Dword latency specification is not applicable to any subsequent transmissions of HOLD_P within the same sequence. Upon each new instance of a HOLD_P/HOLDA_P sequence, the receiver and transmitter operating at Gen3 transfer speeds shall meet this Dword latency specification.