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NVM Express Technical Proposal for New Feature

Technical Proposal ID	6015 – SMBus Reset Enhancements
Change Date	2020-02-13
Builds on Specification	NVMe-MI 1.1

Technical Proposal Author(s)

Name	Company
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Clarifies the behavior of a Management Endpoint slot Command Servicing State on a SMBus Reset for all states (not just the Transmit state). The point of the SMBus reset is to quiesce the Management Endpoint (i.e. not transmit) until directed by the BMC.

Revision History

Revision Date	Change Description
2020-01-02	Initial version
2020-01-06	Added the fact that the Implicit Abort primitive does not include a Response Message by the Management Endpoint.
2020-01-07	Per Management Interface review aligned wording to match wording for Implicit Pause Primitives. The extra text defining the requirement to drop packets in flight was removed since Abort primitives already satisfy the requirement.
2020-01-10	Added all of the text in section 9.34 to be used for reference during discussion.
2020-01-13	Clarified the Pause is a Control Primitive.
2020-01-27	Lowercase "Implicit". Moved filename and date for Phase 3. Covering the plural of not sending Response Messages.

Description for NVMe-MI Changes Document

Section 9.4.3 SMBus Reset is updated to define the requirements on all state of the MCTP Command Servicing State.

Description of Specification Changes

Markup Conventions:

Black: Unchanged (however, hot links are removed)
~~Red Strikethrough~~: Deleted
Blue: New
Blue Highlighted: TBD values, anchors, and links to be inserted in new text.
<Green Bracketed>: Notes to editor

Modify a portion of section 9.3.4 as shown below:

9.3.4 SMBus Reset

All SMBus/I2C elements should support the recommendation for SMBus reset when the SMBus/I2C clock is low for longer than $t_{\text{TIMEOUT,MIN}}$.

Some form factors may also specify one or more separate SMBus reset mechanisms. If such mechanisms are supported by an NVM Subsystem, then the NVM Subsystem shall propagate the reset to all SMBus/I2C elements on the NVM Subsystem and translate the reset, if needed, to Expansion Connector form factors.

If the SMBus/I2C element on an NVM Subsystem is in master mode, then an SMBus Reset shall cause it to generate a STOP condition as defined in the SMBus specification within or after the current data byte in the transfer process. The NVM Subsystem shall remain idle on SMBus for the remainder of the SMBus Reset assertion even if other SMBus/I2C elements attempt to address it. An NVM Subsystem shall be ready to receive a START condition as defined in the SMBus Specification within 10 ms after SMBus Reset de-assertion.

An SMBus Reset shall not modify ARP assigned addresses. Management Controllers may send an ARP reset after the SMBus Reset if addresses need to be reinitialized.

An SMBus Reset shall ~~cause SMBus/I2C Management Endpoints to drop the MCTP packet in flight. If the MCTP Command Servicing State is in Transmit, then it shall change to Idle as if transmit completed. An SMBus Reset does not reset other MCTP state information or abort NVMe-MI Message Servicing.~~ be treated by each Command Slot in the SMBus/I2C Management Endpoint as if an implicit Abort Control Primitive (refer to [section 4.2.1.3](#)) was received with the exception that the Management Endpoint does not transmit the Abort Control Primitive Response Messages.