

To: T10 Membership
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Subject: STT Timeout Function
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This proposal adds a Synchronous Transfer Timeout (STT) field to the SCSI Port Control Mode page. The synchronous transfer timeout is intended to clear the bus in the event of a bus hang. The timer shall apply to synchronous transfers; it does not apply to asynchronous transfers. The existing rules related to synchronous transfer timeout behavior apply.

x.x.x SCSI Port Control mode page

The SCSI Port Control mode page (see table xx) contains those parameters that select SCSI port operation options. The page shall be implemented by LUN 0 of all SCSI devices. The page shall not be implemented by logical units other than LUN 0.

Table xx - SCSI Port Control mode page

Byte	Bit 7	6	5	4	3	2	1	Bit 0
0	PS	Reserved	Page Code (19h)					
1	Page Length (06h)							
3	Reserved						Ralph	
3	Reserved	Reserved	Reserved	Reserved	Reserved	Reserved	Reserved	Reserved
4	STT							
5	Reserved							
6	Reserved							
7	Reserved							

The Ralph field indicates the physical layer that this mode page is intended to apply to.

Ralph	Interface
00b	Fibre Channel
01	Parallel SCSI
10	Serial Storage Architecture
11	1394

The Synchronous Transfer Timeout (STT) field is a sixteen-bit value in one millisecond increments. A value of 0000h indicates that the function is disabled. A value of FFFFh indicates an unlimited period.

The events that control the counter are:

1. If there is a REQ transition when there are no outstanding REqs waiting for an ACK then load and start the timer.
2. If there is a REQ transition when there are any outstanding REqs waiting for an ACK then there is no effect on the timer.
3. If there is an ACK transition when there are outstanding REqs waiting for an ACK then load and start the timer.
4. If after an ACK transition there are no outstanding REqs waiting for an ACK then stop the timer.

If the timer expires then generate an error by going to a BUS FREE phase. The behavior rules specified for an unexpected bus free apply.