ENDL
T E X A S

Date: 1 October 2001
To: T10 Technical Committee
From: Ralph O. Weber
Subject: Comments on 00-356r6 (Interlocked UA)

I have the following comments on 00-356r6.

Document Citation	Sub-clause 5.8.4.2, Asynchronous Event Reporting, top of page 68, pdf page 91, third paragraph on that page:
Text in Question	An exception condition encountered after command completion ~~or unit attention condition~~ shall be reported to a specific initiator once per occurrence of the event causing it. The logical unit may choose to use an asynchronous event report or to return CHECK CONDITION status on a subsequent command, but not both. Notification of an exception condition encountered after command completion shall be ~~returned~~ reported only to the initiator or initiators that sent the affected task or tasks.
Issue	The removal of "or unit attention condition" coming as it does in the subclause on Asynchronous Event Reporting causes a possible misinterpretation wherein multiple asynchronous event reports are allowed for a single unit attention condition. Clarifying text (shown in blue with double underline) is needed.
Proposed Resolution Text	An exception condition encountered after command completion ~~or unit attention condition~~ shall be reported to a specific initiator once per occurrence of the event causing it. The logical unit may choose to use an asynchronous event report or to return CHECK CONDITION status on a subsequent command, but not both. <u>If an asynchronous event report is chosen to report a unit attention condition, the unit attention condition shall be reported to a specific initiator only once per event causing it.</u> Notification of an exception condition encountered after command completion shall be ~~returned~~ reported only to the initiator or initiators that sent the affected task or tasks.

Document Citation	Sub-clause 5.8.4.3, Autosense, middle of page 68, pdf page 91, second paragraph of that sub-clause:
Text in Question	If supported by the protocol and logical unit and requested by the Execute Command remote procedure call (see 5.1), the device server shall only return sense data in this manner coincident with the completion of a command with a status of CHECK CONDITION. After autosense data is sent, ~~the sense data and~~ the CA (NACA equals zero), if any, shall then be cleared. Autosense shall not affect ACA (NACA equals one), see 5.8.1.
Issue	This change is written too broadly, affecting both regular sense data and unit attention sense data. The scope of change should be narrowed as shown.
Proposed Resolution Text	If supported by the protocol and logical unit and requested by the Execute Command remote procedure call (see 5.1), the device server shall only return sense data in this manner coincident with the completion of a command with a status of CHECK CONDITION. After autosense data is sent, sense data except sense data associated with a unit attention condition when the UAINTLCK bit equals one and ~~the sense data and~~ the CA (NACA equals zero), if any, shall then be cleared. Autosense shall not affect ACA (NACA equals one), see 5.8.1 or sense data associated with a unit attention condition when the UAINTLCK bit equals one.

Note that in the unit attention subclause rewrite there are two list item a)'s following the paragraph that begins: "If a REQUEST SENSE command enters the enabled task state…"

Document Citation 1	First sentence of the last paragraph of the rewritten 5.8.5
Text in Question 1	If a logical unit reports a unit attention condition with autosense or with an asynchronous event report, and the unit attention interlock (UAINTLCK) bit in the logical unit's control mode page ~~contains~~ is zero, ~~successfully sends an asynchronous event report informing the initiator of the unit attention condition,~~ then the logical unit may ~~shall~~ clear the reported unit attention condition for that initiator on the logical unit (see 5.8.4.2, 5.8.4.3 and SPC-3).
Document Citation 2	Clause 8.3.6, Control mode page, middle of page 203, pdf page 224, add the following paragraph (second sentence of addition only):
Text in Question 2	A ~~unit attention interlock (~~UAINTLCK~~)~~ bit of zero specifies that the logical unit may ~~shall~~ clear any unit attention condition reported with autosense or asynchronous event reporting ~~(see SAM-2)~~.
Document Citation 3	Clause 8.3.6, Control mode page, middle of page 203, pdf page 224, add the following paragraph (last sentence of addition only):
Text in Question 3	A REQUEST SENSE command ~~shall~~ clears any unit attention condition that it reports.
Issue	I am having difficulty remembering why a unit attention condition reported with AER or autosense only 'may' be cleared when UAINTLCK is zero as described in cited text 1 and 2. This suggests that there is something in today's behavior that allows reporting of a unit attention condition with AER or autosense that does not result in clearing of the unit attention condition. I wonder if the wording from cited text 3 could be substituted.
Proposed Resolution Text 1	If a logical unit reports a unit attention condition with autosense or with an asynchronous event report, and the unit attention interlock (UAINTLCK) bit in the logical unit's control mode page ~~contains~~ is zero, ~~successfully sends an asynchronous event report informing the initiator of the unit attention condition,~~ then the logical unit ~~may shall~~ clears the reported unit attention condition for that initiator on the logical unit (see 5.8.4.2, 5.8.4.3 and SPC-3).
Proposed Resolution Text 2	A ~~unit attention interlock (~~UAINTLCK~~)~~ bit of zero specifies that the logical unit ~~may shall~~ clears any unit attention condition reported with autosense or asynchronous event reporting ~~(see SAM-2)~~.