ONFI Technical Errata

Errata ID	**003**
Affected Spec Ver.	**ONFI 2.0, 2.1, 2.2**
Corrected Spec Ver.	

Submission info

Name	Company	Date
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For multiple LUN read sequences, the Read Status Enhanced (78h) command is used to poll for status. A consequence of the Read Status Enhanced command is that output buffers on LUNs not selected are turned off. This places unselected LUNs in the L_Idle state. The issue is when that LUN is selected later using a Read Status Enhanced command and its output buffer is re-enabled, the state machine does not transition from L_Idle back to the L_Idle_Rd state where data transfer may commence. This erratum corrects this issue by causing the LUN to go back to L_Idle_Rd after a Read Status Enhanced command is received for that LUN and the last command was a read.

It was also identified that the confirmation command of 32h for interleaved reads is never recorded in the lunLastConfirm variable. This issue is also addressed.

Another minor issue identified is that the definition of tCALH and tCALS should note that these parameters also apply to W/R#. This issue is also addressed.

Description of the specification technical flaw

Modify state L_Status_Record_78h in section 7.2.4 as shown:

L_Status_Record_78h	lunStatusCmd is set to 78h and lunStatusIlv is set to interleaved address indicated by Target. The LUN turns on its output buffer.		
	1. lunReturnState set to L_Idle and (lunLastConfirm set to 30h, 31h, 32h, or 35h)	→	L_Idle_Rd
	2. ~~Unconditional~~ Else	→	lunReturnState

Modify state L_Status_Record_78h in section 7.2.7 as shown:

L_RD_Ilv_Xfer	The LUN performs the following actions: 1. lunStatus[6:5] is cleared to 00b. 2. lunStatus[6] value is indicated to the target. 3. lunLastConfirm set to 32h. 4. lunbIlvNextCmd is set to FALSE. 5. LUN begins reading page specified if overlapped interleaving is supported. 6. Prepare to receive the next page to read. 7. lunReturnState set to L_RD_Ilv_Xfer.		
	1. Target ready to receive next page to read	→	L_RD_Ilv_Wait
	2. Target requests status or status command received	→	L_Status_Execute

Modify tCALH and tCALS entries in Table 24 as shown:

tCALH	W/R#, CLE and ALE hold time
tCALS	W/R#, CLE and ALE setup time

Disposition log

11/30/2009	Erratum captured.
1/14/2010	Erratum ratified.

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