ONFI Technical Errata

Errata ID	**002**
Affected Spec Ver.	**ONFI 2.1**
Corrected Spec Ver.	

Submission info

Name	Company	Date
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Description of the specification technical flaw (add space as needed)

This erratum clarifies use of Change Read Column Enhanced command in multiple LUN read operations. To avoid bus contention if a Change Read Column Enhanced command is received while a LUN is idle then the output buffers of an unselected LUN need to be turned off.

Description of the correction

Modify section 5.20 as shown:

5.20 Change Read Column Enhanced Definition

The Change Read Column Enhanced function changes the LUN address, interleaved address and column address from which data is being read in a page previously retrieved with the Read command. This command is used when independent LUN operations or interleaved operations are being performed such that the entire address for the new column needs to be given. Figure 74 defines the Change Read Column Enhanced behavior and timings.

The Change Read Column Enhanced command shall not be issued by the host unless it is supported as indicated in the parameter page. Change Read Column Enhanced shall not be issued while Target level data output commands (Read ID, Read Parameter Page, Read Unique ID, Get Features) are executing or immediately following Target level commands.

Change Read Column Enhanced causes idle LUNs (SR[6] is one) that are not selected to turn off their output buffers. This ensures that only the LUN selected by the Change Read Column Enhanced command responds to subsequent data output. If unselected LUNs are active (SR[6] is zero) when Change Read Column Enhanced is issued, then the host shall issue a Read Status Enhanced (78h) command prior to subsequent data output to ensure all LUNs that are not selected turn off their output buffers.

Modify section 7.1.3 as shown:

T_CRE_ReturnToData	The target performs the following actions: 1. Set tLunSelected to LUN selected by row address received. 2. Request that LUN tLunSelected select the column in the page register based on the column address received. 3. Indicate interleaved address received to tLunSelected for use in data output. 4. Request all idle LUNs not selected turn off their output buffers.[1]

1. tReturnState set to T_PP_IlvWait	☐	T_PP_WaitForDataOut
2. tReturnState set to T_RD_Status_Off	☐	T_Idle_Rd
3. Else	☐	tReturnState

NOTE:
1. LUNs not selected only turn off their output buffers if they are in an idle condition (SR[6] is one) when Change Read Column Enhanced is received. If LUNs are active (SR[6] is zero) when Change Read Column Enhanced is issued, then the host shall issue a Read Status Enhanced (78h) command prior to subsequent data output to ensure all LUNs that are not selected turn off their output buffers.

Disposition log

2/13/2009	Erratum captured.
5/5/2009	Erratum ratified.

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