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- (71) **Applicant (for all designated States except US):** **MI-CRON TECHNOLOGY, INC.** [US/US]; 8000 S Federal Way, Boise, Idaho 83716-9632 (US).
- (72) **Inventors; and**
- (75) **Inventors/Applicants (for US only):** **LARSON, Douglas, A.** [US/US]; 16351 Goodview Trail, Lakeville, Minnesota 55044 (US). **BROWN, Jeffrey, R.** [US/US]; 612 Wiloughby Way W, Minnetonka, Minnesota 55305 (US).
- (74) **Agent:** **LORFING, Jason, P.;** Brooks, Cameron & Huebsch PLLC, 1221 Nicollet Avenue, Suite 500, Minneapolis, Minnesota 55403 (US).

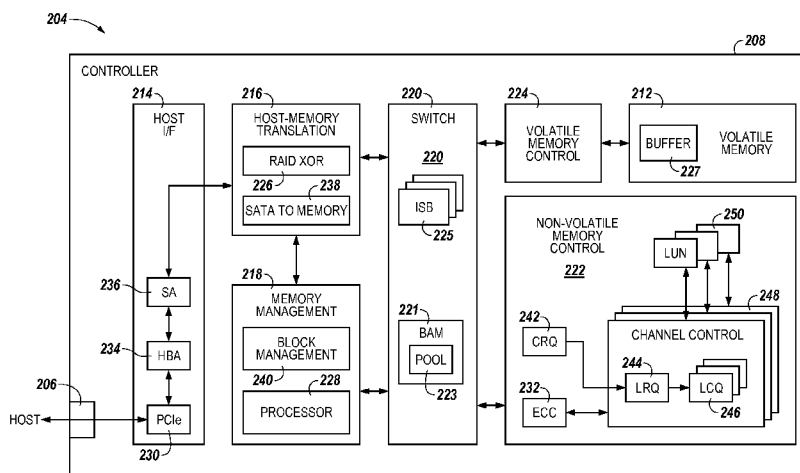
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(54) **Title:** APPARATUS INCLUDING MEMORY SYSTEM CONTROLLERS AND RELATED METHODS**Fig. 2**

(57) **Abstract:** Memory system controllers can include a switch and non-volatile memory control circuitry coupled to the switch. The non-volatile memory control circuitry can include a channel control circuit coupled to logical units. The channel control circuitry can be configured to relay an erase command to a first one of the logical units and relay a particular command from the switch to a second one of the logical units while the erase command is being executed on the first one of the plurality of logical units.

A. CLASSIFICATION OF SUBJECT MATTER*G11C 16/06(2006.01)i, G06F 12/00(2006.01)i*

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

G11C 16/06; G06F 12/02; G06F 13/10; G06F 12/00; G06F 9/00; G06F 15/167; G06F 13/12

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

eKOMPASS(KIPO internal) & Keywords: non-volatile memory, control circuitry, channel control, logical unit, switch, relay, command

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 2011-0082963 A1 (JEDDELOH JOSEPH M.) 07 April 2011 See paragraphs [0035],[0036]; figures 1-2.	1-20
A	JP 2006-040026 A (HITACHI LTD et al.) 09 February 2006 See paragraphs [0005],[0006]; figure 1; claim 1.	1-20
A	US 2005-0198186 A1 (MOR GRIV) 08 September 2005 See paragraphs [0009],[0010],[0030]; figures 1-3; claim 1.	1-20
A	US 2011-0060869 A1 (SCHUETTE FRANZ MICHAEL) 10 March 2011 See paragraphs [0020],[0022]; figures 2-3; claims 1,7.	1-20



Further documents are listed in the continuation of Box C.



See patent family annex.

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"&" document member of the same patent family

Date of the actual completion of the international search

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Authorized officer

HAN, Seon Kyoung

Telephone No. 82-42-481-8523



INTERNATIONAL SEARCH REPORT

Information on patent family members

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US 2005-0198186 A1	08.09.2005	None	
US 2011-0060869 A1	10.03.2011	None	