

(19) World Intellectual Property Organization
International Bureau



(43) International Publication Date
7 June 2007 (07.06.2007)

PCT

(10) International Publication Number
WO 2007/064781 A3

- (51) International Patent Classification:
G11C 29/00 (2006.01)
- (21) International Application Number:
PCT/US2006/045820
- (22) International Filing Date:
30 November 2006 (30.11.2006)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
60/740,791 30 November 2005 (30.11.2005) US
60/757,348 9 January 2006 (09.01.2006) US
- (71) Applicant (for all designated States except US):
KELSEY-HAYES COMPANY [US/US]; 12001 TECH
CENTER DRIVE, Livonia, MI 48150 (US).
- (72) Inventor; and
- (75) Inventor/Applicant (for US only): HALLER, Mark
[US/US]; 44976 N. SPRING DRIVE, Canton, MI 48187
(US).
- (74) Agent: MOLNAR, John, B.; MACMILLAN, SOBAN-
SKI & TODD, LLC, ONE MARITIME PLAZA, 5TH
FLOOR, 720 WATER STREET, Toledo, OH 43604 (US).

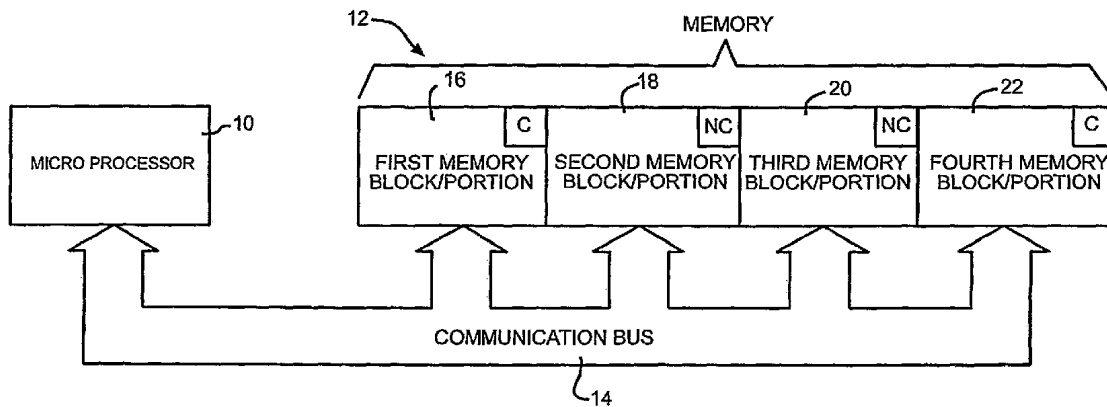
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IS, JP, KE, KG, KM, KN, KP, KR, KZ, LA, LC, LK, LR, LS, LT, LU, LV, LY, MA, MD, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, SV, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW.
- (84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, LV, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— with international search report

(88) Date of publication of the international search report:
7 May 2009

(54) Title: MICROPROCESSOR MEMORY MANAGEMENT



(57) Abstract: A memory for an electronic brake control system is divided into portions that are classified as critical and non-critical. Each portion is periodically tested for faults. Upon detection of a fault, the memory is reconfigured with any operations of the brake system associated with a critical memory portion permanently disabled and any operations of the brake system associated with a non-critical memory portion temporarily disabled.

WO 2007/064781 A3

INTERNATIONAL SEARCH REPORT

International application No.

PCT/US 06/45820

A. CLASSIFICATION OF SUBJECT MATTER IPC(8) - G11C 29/00 (2007.10) USPC - 714/733 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) USPC - 714/733 Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched USPC - 714/733, /36, /100, /746; 714/711, /718; 365/200, /201 Electronic data base consulted during the international search (name of data base and, where practicable, search terms used) PublicWest (PGPB,USPT,EPAB,JPAB); Google Patents Search Terms: brake, ROM, volatile, memory, corrupted, fix, remedy, microprocessor, brake, control, BIST, BISR, memory test, readdress, reassign, non-critical memory, NVRAM, non-volatile		
C. DOCUMENTS CONSIDERED TO BE RELEVANT		
Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6,728,910 B1 (HUANG) 27 April 2004 (27.04.2004), entire document (especially fig 5; col 6, ln 13-35; col 7, ln 23-56)	1 and 8-9
—		—
Y		2-7 and 10-13
X	US 2004/0268106 A1 (HOLMBERG et al.) 30 December 2004 (30.12.2004), entire document (especially Fig 1; para [0002], [0008]-[0009], [0024]-[0025], [0045], [0049]-[0050])	14-19
Y	US 2003/0041217 A1 (TERADA et al.) 27 February 2003 (27.02.2003), fig 1 and para [0144])	2-7 and 13
Y	US 4,493,303 A (THOMPSON et al.) 15 January 1985 (15.01.1985), entire document (especially col 12, ln 46-60; col 13, ln 1-23)	3-7 and 10-13
A	US 6,167,338 A (DE WILLE et al.) 26 December 2000 (26.12.2000)	14-19
A	US 2004/0199825 A1 (ZELLER et al.) 7 October 2004 (07.10.2004)	14-19
A	US 2004/0092255 (JI et al.) 13 May 2004 (13.05.2004)	14-19
A	US 2005/0190615 A1 (LINDE et al.) 1 September 2005 (01.09.2005)	14-19
<input type="checkbox"/> Further documents are listed in the continuation of Box C. <input type="checkbox"/>		
* Special categories of cited documents: "A" document defining the general state of the art which is not considered to be of particular relevance "E" earlier application or patent but published on or after the international filing date "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified) "O" document referring to an oral disclosure, use, exhibition or other means "P" document published prior to the international filing date but later than the priority date claimed "T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention "X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone "Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art "&" document member of the same patent family		
Date of the actual completion of the international search 1 November 2007 (01.11.2007)		Date of mailing of the international search report 18 MAR 2008
Name and mailing address of the ISA/US Mail Stop PCT, Attn: ISA/US, Commissioner for Patents P.O. Box 1450, Alexandria, Virginia 22313-1450 Facsimile No. 571-273-3201		Authorized officer: Lee W. Young PCT Helpdesk: 571-272-4300 PCT OSP: 571-272-7774