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61/064,923 3 April 2008 (03.04.2008) US(71) Applicant (for all designated States except US): **DENS-BITS TECHNOLOGIES LTD.** [IL/IL]; Building 30, Flr 3, Matam Industrial Park, P.O.Box 15111, 31015 Haifa (IL).

(72) Inventors; and

(75) Inventors/Applicants (for US only): **WEINGARTEN, Hanan** [IL/IL]; Hayarden 2, 46377 Herzliya (IL). **LEVY, Shmuel** [IL/IL]; 9 Fish Street, 36025 Tivon (IL). **BAR, Ilan** [IL/IL]; 27 Menachem Begin Steet, 26731 Kiryat Motzkin (IL).(74) Agent: **PEARL COHEN ZEDEK LATZER**; 5 Shenkar Street, P.O. Box 12704, Herzlia 46733 (IL).

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(54) Title: APPARATUS FOR CODING AT A PLURALITY OF RATES IN MULTI-LEVEL FLASH MEMORY SYSTEMS, AND METHODS USEFUL IN CONJUNCTION THEREWITH

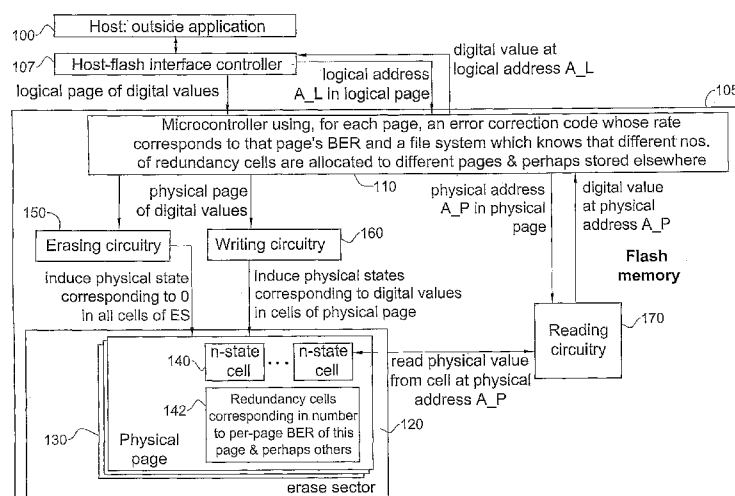


Figure 1

(57) Abstract: A method and system for writing in flash memory, the system operative for, and the method comprising, writing data onto a plurality of logical pages characterized by a plurality of different probabilities of error respectively, the writing including encoding data intended for each of the plurality of physical pages using a redundancy code with a different code rate for each individual physical page, the code rate corresponding to the probability of error in the individual logical page.

INTERNATIONAL SEARCH REPORT

International application No.

PCT/IL 08/01243

A. CLASSIFICATION OF SUBJECT MATTER

IPC(8) - G11C 16/04 (2009.01)

USPC - 365/185.33

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)

IPC(8): G11C 16/04 (2009.01)

USPC: 365/185.33

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched
USPC: 365/185.01, 365/185.03, 365/185.24, 365/185.33 (keyword limited - see terms below)

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

PubWEST(PGPB, USPT, EPAB, JPAB); Google; Search Terms: flash memory, writing, pages, logical, encoding, error, redundancy, redundancy rate, probability, logical pages, physical pages, cells, bits, redundancy rate, physical page, logical page, multi-level pages, multilevel pages, multi-level cells, individual cell, cell

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X --- Y	US 2007/0097744 A1 (LI et al.) 03 May 2007 (03.05.2007), para. [0008], [0013], [0017], [0020], [0023], [0025], [0031]-[0034], [0037], [0040]-[0041], [0074], [0077], [0079], [0084], [0088], [0101], [0104], [0108], [0110], [0122]-[0123], [0128], and [0137].	1-6, 18, 21 ----- 22
X --- Y	US 2006/0101193 A1 (MURIN) 11 May 2006 (11.05.2006), abstract, para. [0002]-[0003], [0004]-[0005], [0007], [0009], [0013], [0021], [0028], [0030]-[0032], [0035], [0037]-[0038], [0048], [0050]-[0051], [0054]-[0055], [0059], [0077], [0110], [0135], [0140]-[0142], [0157]-[0158], [0161], [0170]-[0173], [0177], [0179]-[0181], [0183], and [0185].	7-17, 19-20 ----- 22
A	US 2007/0086239 A1 (LITSYN et al.) 19 April 2007 (19.04.2007), entire document	1-22

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"&" document member of the same patent family

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Facsimile No. 571-273-3201

Authorized officer:

Lee W. Young

PCT Helpdesk: 571-272-4300

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