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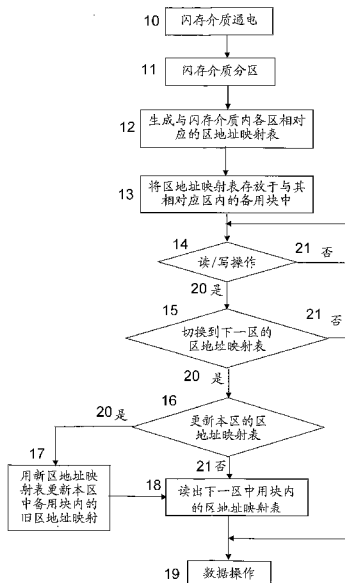
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(81) 指定国 (除另有指明, 要求每一种可提供的国家保护): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH,

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(54) Title: DATA MANAGEMENT METHOD IN FLASH MEMORY MEDIUM

(54) 发明名称: 内存介质数据管理方法



- 10 POWER ON A FLASH MEMORY
- 11 DIVIDING THE FLASH MEMORY INTO A NUMBER OF ZONES
- 12 GENERATING A ZONE ADDRESS MAPPING TABLE CORRESPONDING TO THE RESPECTIVE ZONES OF THE FLASH MEMORY
- 13 STORING THE ZONE ADDRESS MAPPING TABLE INTO A SPARE BLOCK OF THE CORRESPONDING ZONE
- 14 READ/WRITE OPERATION
- 15 SWITCHING TO THE ZONE ADDRESS MAPPING TABLE OF NEXT ZONE
- 16 UPDATING THE ZONE ADDRESS MAPPING TABLE OF THE CURRENT ZONE
- 17 UPDATING THE OLD ZONE ADDRESS MAPPING TABLE IN THE SPARE BLOCK OF THE CURRENT ZONE WITH A NEW ZONE ADDRESS MAPPING TABLE
- 18 READING OUT THE ZONE ADDRESS MAPPING TABLE IN A SPARE BLOCK OF NEXT ZONE
- 19 DATA OPERATION
- 20 YES
- 21 NO

(57) Abstract: A data management method in flash memory medium of the present invention comprises the following steps: dividing a flash memory medium into a number of zones; generating a zone address mapping table by scanning logical addresses in storage blocks of the respective zones of the flash memory medium; storing the zone address mapping table in a corresponding spare block of the respective zones; and reading out the zone address mapping table into RAM to convert between logical addresses and physical addresses, thus operating on the data in the flash memory medium. Since the zone address mapping table is stored in the spare block of the corresponding zone, when the flash memory medium is operated on the data recorded in the data blocks and needs switch to the zone address mapping table of the next zone, the required data can be read out based on the zone address mapping table stored in the spare block of the next zone without scanning all the storage blocks of the next zone. Therefore the flash memory management method can save the data operating time and thus can achieve efficient management of the flash memory.

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GM, 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.

KG, KZ, MD, RU, TJ, TM), 欧洲 (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)。

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(57) 摘要:

本发明提供一种闪存介质数据管理方法, 其包括以下步骤: 将闪存介质分区; 通过扫描闪存介质各区中存储块内的逻辑地址, 生成区地址映射表; 将区地址映射表存放于各区中相应的备用块内; 通过将区地址映射表读出至RAM内进行逻辑地址和物理地址之间的转换, 实现闪存介质内的数据操作。由于将区地址映射表存放于各相应区的备用块中, 当闪存介质针对记录于数据块中的进行数据操作而需要切换到下一区的区地址映射表时, 根据存放于下一区中备用块内的区地址映射表即可将所需数据读出, 而无需针对下一区内的每个存储块进行扫描, 动态生成新的区地址映射表, 因此, 该闪存介质数据管理方法可以节省数据操作的时间, 从而实现闪存介质数据的高效管理。