

(12) International Application Status Report

Received at International Bureau: 02 September 2011 (02.09.2011)

Report generated on: 23 January 2014 (23.01.2014)

(10) Publication number:

WO2012/136037

(43) Publication date:

11 October 2012 (11.10.2012)

(26) Publication language:

Chinese (ZH)

(21) Application Number:

PCT/CN2011/078721

(22) Filing Date:

22 August 2011 (22.08.2011)

(25) Filing language:

Chinese (ZH)

(31) Priority number(s):

201110086342.6 (CN)

(31) Priority date(s):

07 April 2011 (07.04.2011)

(31) Priority status:

Priority document received (in compliance with PCT Rule 17.1)

(51) International Patent Classification:

G06F 9/38 (2006.01)

(71) Applicant(s):

ZTE CORPORATION [CN/CN]; ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan Shenzhen, Guangdong 518057 (CN) *(for all designated states except US)*

LI, Lihuang [SG/CN]; ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan Shenzhen, Guangdong 518057 (CN) *(for US only)*

REN, Hui [CN/CN]; ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan Shenzhen, Guangdong 518057 (CN) *(for US only)*

TIAN, Chunyu [CN/CN]; ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan Shenzhen, Guangdong 518057 (CN) *(for US only)*

(72) Inventor(s):

LI, Lihuang; ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan Shenzhen, Guangdong 518057 (CN)

REN, Hui; ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan Shenzhen, Guangdong 518057 (CN)

TIAN, Chunyu; ZTE Plaza, Keji Road South, Hi-Tech Industrial Park, Nanshan Shenzhen, Guangdong 518057 (CN)

(74) Agent(s):

CHINA PAT INTELLECTUAL PROPERTY OFFICE; 2nd Floor, Zhongguancun Intellectual Property Building Block B, No.21 Haidian South Road, Haidian Beijing 100080 (CN)

(54) Title (EN): METHOD AND DEVICE FOR DATA TRANSMISSION BETWEEN REGISTER FILES

(54) Title (FR): PROCÉDÉ ET DISPOSITIF DE TRANSMISSION DE DONNÉES ENTRE FICHIERS DE REGISTRE

(54) Title (ZH): 一种实现寄存器文件间的数据传输方法及装置

(57) Abstract:

(EN): Disclosed are a method and device for data transmission between register files, comprising: reading the data in a register file at the i^{th} phase of a pipeline, and utilizing an idle instruction pipeline to transmit the read-data to a target register file. The method of the present invention utilizes idle instruction pipelines to transmit data and mask information without adding redundant registers to cache the data and control information. In this way, logic consumption is reduced while utilization rate of existing functional units is improved.

(FR): L'invention porte sur un procédé de fonctionnement d'un dispositif de transmission de données entre fichiers de registre, consistant à : lire les données dans un fichier de registre au niveau de la $i^{\text{ème}}$ phase d'un pipeline, et utiliser un pipeline d'instruction inoccupé pour transmettre les données lues à un fichier de registre cible. Le procédé de la présente invention utilise des pipelines d'instruction inoccupés pour transmettre des données et des informations de masque sans ajouter des registres redondants pour mettre en cache les données et des informations de commande. De cette manière, la consommation de logique est réduite tandis que le taux d'utilisation d'unités fonctionnelles existantes est amélioré.

(ZH): 本发明公开了一种实现寄存器文件间的数据传输方法及装置,包括在流水线的第i阶读取源寄存器文件中的数据,利用空闲的指令流水线将读取的数据传输至目的寄存器文件。本发明方法利用空闲指令流水线来传输数据和屏蔽码信息,不增加多余的寄存器来暂存数据和控制信息,这样,减小了逻辑消耗,同时提高了现有功能单元的利用率。

International search report:

Received at International Bureau: 18 January 2012 (18.01.2012) [CN]

International Report on Patentability (IPRP) Chapter II of the PCT:

Not available

(81) Designated States:

AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM, DO, 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, LY, MA, MD, ME, MG, MK, MN, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PE, PG, PH, PL, PT, QA, RO, RS, RU, SC, SD, SE, SG, SK, SL, SM, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, ZA, ZM, ZW

European Patent Office (EPO) : AL, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HR, HU, IE, IS, IT, LT, LU, LV, MC, MK, MT, NL, NO, PL, PT, RO, RS, SE, SI, SK, SM, TR

African Intellectual Property Organization (OAPI) : BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG

African Regional Intellectual Property Organization (ARIPO) : BW, GH, GM, KE, LR, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW

Eurasian Patent Organization (EAPO) : AM, AZ, BY, KG, KZ, MD, RU, TJ, TM