



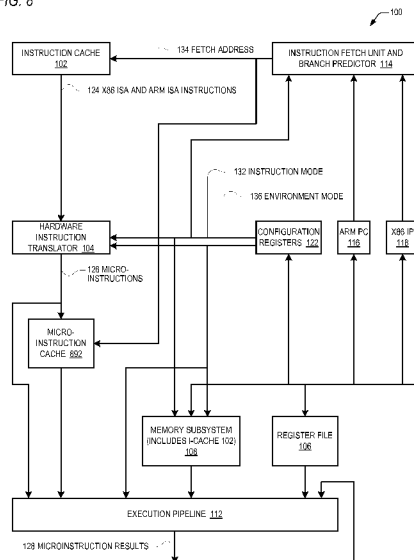
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61/537,473	21 September 2011 (21.09.2011)	US	EDDY, Colin [US/US]; 360, Nueces St., Unit 4107, Aus-
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[Continued on next page]

(54) Title: CONDITIONAL LOAD INSTRUCTIONS IN AN OUT-OF-ORDER EXECUTION MICROPROCESSOR

(57) Abstract: A microprocessor instruction translator translates a conditional load instruction into at least two microinstructions. An out-of-order execution pipeline executes the microinstructions. To execute a first microinstruction, an execution unit receives source operands from the source registers of a register file and responsively generates a first result using the source operands. To execute a second the microinstruction, an execution unit receives a previous value of the destination register and the first result and responsively reads data from a memory location specified by the first result and provides a second result that is the data if a condition is satisfied and that is the previous destination register value if not. The previous value of the destination register comprises a result produced by execution of a microinstruction that is the most recent in-order previous writer of the destination register with respect to the second microinstruction.

FIG. 8





**(81) Designated States** (*unless otherwise indicated, for every kind of national protection available*): 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, RW, 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.

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**A. CLASSIFICATION OF SUBJECT MATTER**

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USPC - 712/216

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)

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USPC: 712/216

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched  
USPC: 712/1,200,214,215,217,218,219,220,E9.049 (keyword limited; 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 Scholar; Google Patents; FreePatentsOnline. Search terms used: microprocessor micro-processor, execution-architecture execution-unit-architecture execute-instruction-architecture execute-code-architecture execute-microcode instruction-set-architecture micro-architecture instruction-architecture...

**C. DOCUMENTS CONSIDERED TO BE RELEVANT**

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 6,647,489 B1 (COL et al.) 11 November 2003 (11.11.2003) entire document, especially Abstract; col 3, ln 18-29; col 4, ln 66 to col 5, ln 28; col 6, ln 28 to col 7, ln 53; col 8, ln 29-37, 63 to col 10, ln 8; col 13, ln 18-43; col 14, ln 23-56; col 17, ln 8-20	1 - 39
Y	US 2009/0300331 A1 (GSCHWIND et al.) 03 December 2009 (03.12.2009) entire document, especially Abstract; para [0014], [0019], [0030], [0033], [0043], [0045], [0098], [0099], [0099], [0105], [0117], [0125], [0130], [0140], [0146], [0157], [0163], [0168]-[0170], [0174]-[0176], [0178], [0198]-[0200], [0203], [0229]	1 - 39
Y	US 5,887,152 A (TRAN) 23 March 1999 (23.03.1999) entire document, especially Abstract; Fig.44; col 72, ln 25-31; col 75, ln 23-31; col 3, ln 8-21; col 93, ln 5-13; col 94, ln 35-56; col 96, ln 40-55; col 99, ln 1-17	3-6, 24, 32
A	US 2009/0031116 A1 (SUDHAKAR et al.) 29 January 2009 (29.01.2009) entire document	1 - 39
A	US 2002/0194458 A1 (SONI) 19 December 2002 (19.12.2002) entire document	1 - 39

Further documents are listed in the continuation of Box C.

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"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

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"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

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"&" document member of the same patent family

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