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61/436,013 25 January 2011 (25.01.2011) US(71) Applicant (for all designated States except US): **MICRON TECHNOLOGY, INC.** [US/US]; 8000 So. Federal Way, Boise, Idaho 83716-9632 (US).

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(54) Title: METHOD AND APPARATUS FOR COMPILING REGULAR EXPRESSIONS

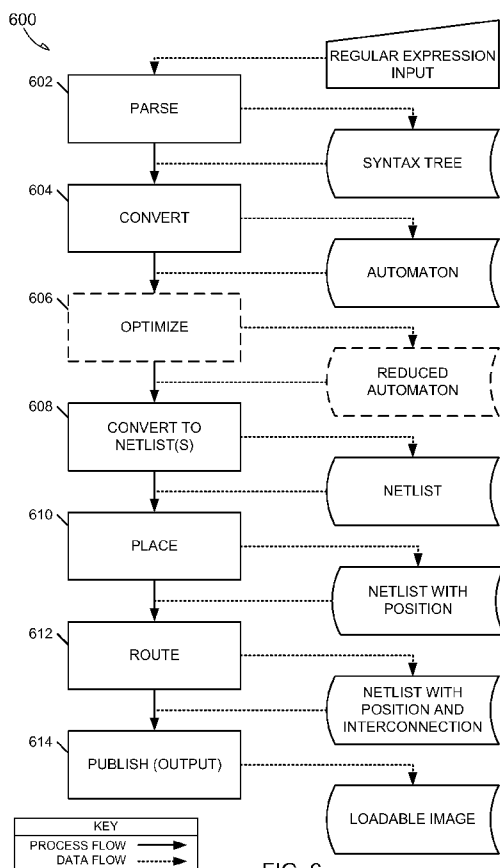


FIG. 6

(57) Abstract: Apparatus, systems, and methods for a compiler are described. One such compiler converts source code into an automaton comprising states and transitions between the states, wherein the states in the automaton include a special purpose state that corresponds to a special purpose hardware element. The compiler converts the automaton into a netlist, and places and routes the netlist to provide machine code for configuring a target device.



GM, KE, LR, LS, MW, MZ, NA, RW, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (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), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

— *before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments (Rule 48.2(h))*

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INTERNATIONAL SEARCH REPORT

International application No.
PCT/US2012/022435**A. CLASSIFICATION OF SUBJECT MATTER****G06F 9/45(2006.01)i**

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)

G06F 9/45; G06F 17/50; G06F 17/00; G06N 5/02

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Korean utility models and applications for utility models

Japanese utility models and applications for utility models

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

eKOMPASS(KIPO internal) & Keywords: "state machine, convert, code"

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 7020850 B2 (VIJAYA RAGHAVAN et al.) 28 March 2006 See column 5, line 53 - column 6, line 26, column 6, line 65 - column 7, line 13, column 11, lines 35-41, claims 1-3,5,12, and figures 3-4,8,16-17.	1-29
A	US 05537580A A (GIOMI; JEAN-CHARLES et al.) 16 July 1996 See column 4, lines 34-59, claims 23-24, and figure 1b.	1-29
A	US 2010-0100518 A1 (ANDRADE HENRIQUE et al.) 22 April 2010 See paragraphs [0035],[0041], claims 1,12, and figures 1,3	1-29
A	US 6748588 B1 (FRASER; CHRISTOPHER W. et al.) 08 June 2004 See column 11, lines 50-53, column 13, lines 50-53, claim 9, and figure 5.	1-29

☐ Further documents are listed in the continuation of Box C.☒ See patent family annex.

* Special categories of cited documents:

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"P" document published prior to the international filing date but later than the priority date claimed

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"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

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INTERNATIONAL SEARCH REPORT

Information on patent family members

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Patent document cited in search report	Publication date	Patent family member(s)	Publication date
US 7020850 B2	28.03.2006	US 2003-0046658 A1 US 7433808 B1 US 7941303 B1	06.03.2003 07.10.2008 10.05.2011
US 05537580A A	16.07.1996	None	
US 2010-0100518 A1	22.04.2010	US 8095494 B2	10.01.2012
US 6748588 B1	08.06.2004	None	