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[Continued on next page]

(54) Title: UTILIZING SPECIAL PURPOSE ELEMENTS TO IMPLEMENT A FSM

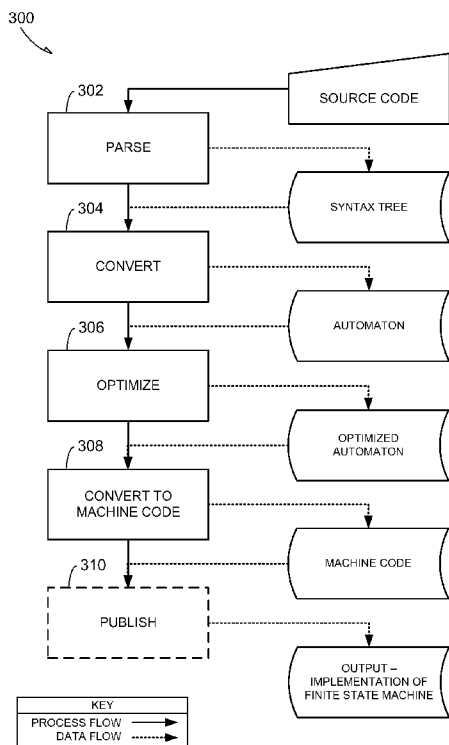


FIG. 3

(57) Abstract: Apparatus, systems, and methods for a compiler are described. One such compiler generates machine code corresponding to a set of elements including a general purpose element and a special purpose element. The compiler identifies a portion in an arrangement of relationally connected operators that corresponds to a special purpose element. The compiler also determines whether the portion meets a condition to be mapped to the special purpose element. The compiler also converts the arrangement into an automaton comprising a plurality of states, wherein the portion is converted using a special purpose state that corresponds to the special purpose element if the portion meets the condition. The compiler also converts the automaton into machine code. Additional apparatus, systems, and methods are disclosed.

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SM, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ,
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B. FIELDS SEARCHED

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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: "generate, machine 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 6, lines 46-50, column 12, lines 27-30, claims 2-3, and figures 6, 16, 19.	1-41
A	US 05831853A A (BOBROW; DANIEL G. et al.) 03 November 1998 See column 5, lines 1-58, claim 6, and figure 3.	1-41
A	US 2010-0100518 A1 (ANDRADE HENRIQUE et al.) 22 April 2010 See paragraphs [0021]-[0033],[0041], claims 2,4,12, and figures 1,3.	1-41
A	US 6748588 B1 (FRASER; CHRISTOPHER W. et al.) 08 June 2004 See column 10, lines 54-66, column 11, lines 39-61, claim 1, and figures 4-5.	1-41

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

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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 05831853A A	03.11.1998	None	
US 2010-0100518 A1	22.04.2010	US 8095494 B2	10.01.2012
US 6748588 B1	08.06.2004	None	