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- (81) **Designated States** (*unless otherwise indicated, for every
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BZ, CA, CH, CL, CN, CO, CR, CU, CZ, DE, DK, DM,

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HN, HR, HU, ID, IL, IN, IR, IS, JP, KE, KG, KN, KP, KR,
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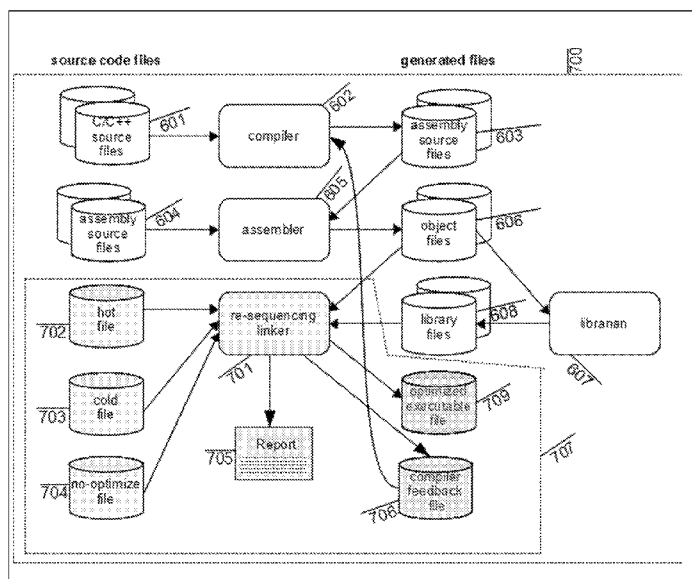
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(54) **Title:** SOFTWARE DEVELOPMENT TOOL

Figure 20

(57) **Abstract:** The software development tool (701) forms part of a software development kit (700). The software development tool (701) receives as input object files (606) and library files (607) and subjects the object file instructions and data definitions of the object files and the library files to re-sequencing to generate new object files and the links between them which are semantically equivalent to the input object files and library files and which are used to generate an optimized executable. The software development tool (701) is capable of automatically generating an executable, without requiring any modification of the source code, which is optimized to execute more deterministically and with respect to execution time; reduced processor and memory requirements; reduced off-chip memory accesses; reduced memory latency.

INTERNATIONAL SEARCH REPORT

International application No

PCT/GB2014/052377

A. CLASSIFICATION OF SUBJECT MATTER

INV. G06F9/45

ADD.

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

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

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

EP0-Internal, WPI Data

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
Y	US 5 966 539 A (SRIVASTAVA AMITABH [US]) 12 October 1999 (1999-10-12) column 4 - column 13 -----	1-78
Y	US 2002/038453 A1 (RIDDLE ANDREW [US] ET AL) 28 March 2002 (2002-03-28) paragraph [0016] - paragraph [0034] -----	1-41
A	US 2008/115120 A1 (CLIFTON NICHOLAS O J [GB] ET AL) 15 May 2008 (2008-05-15) paragraph [0014] - paragraph [0037] -----	1-78
A	US 5 469 572 A (TAYLOR JAMES M [US]) 21 November 1995 (1995-11-21) column 9 - column 15; figure 14b ----- -/--	1-78

☒ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

* Special categories of cited documents :

"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

"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

"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

"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"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

"&" document member of the same patent family

Date of the actual completion of the international search

26 January 2015

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06/02/2015

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INTERNATIONAL SEARCH REPORT

International application No

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C(Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	GB 2 463 942 A (ICERA INC [US]) 7 April 2010 (2010-04-07) page 18 - page 34 -----	1-78
Y	US 2004/068719 A1 (LIU SHIN-MING [US] ET AL) 8 April 2004 (2004-04-08) paragraph [0047] - paragraph [0054] -----	42-78
A	US 6 317 874 B1 (PRASANNA G N SRINIVASA [US]) 13 November 2001 (2001-11-13) column 4; figure 2 -----	1,3,15, 17,29, 31,45, 46,57, 58,70,71

INTERNATIONAL SEARCH REPORT

International application No.
PCT/GB2014/052377

Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

see additional sheet

1. ☒ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fees, this Authority did not invite payment of additional fees.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest and, where applicable, the payment of a protest fee.
- ☐ The additional search fees were accompanied by the applicant's protest but the applicable protest fee was not paid within the time limit specified in the invitation.
- ☒ No protest accompanied the payment of additional search fees.

FURTHER INFORMATION CONTINUED FROM PCT/ISA/ 210

This International Searching Authority found multiple (groups of) inventions in this international application, as follows:

1. claims: 1-41

Global optimization of object files by re-sequencing instructions and data, generating multiple versions of optimizations and generating code corresponding to a chosen version

2. claims: 42-78

Analysis of object files and determination of data areas for optimization and provision of information as feedback to compiler, receiving optimized object files from compiler and generating code based on them

INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No

PCT/GB2014/052377

Patent document cited in search report		Publication date	Patent family member(s)	Publication date
US 5966539	A	12-10-1999	US 5966539 A	12-10-1999
			US 5999737 A	07-12-1999

US 2002038453	A1	28-03-2002	NONE	

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GB 2463942	A	07-04-2010	GB 2463942 A	07-04-2010
			US 2010088688 A1	08-04-2010

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