generate the original code (310)

collect statistics of usage patterns (320)

feed the statistics back into the system to recreate and optimize the code (330)

reload the code into the system and regenerate the code (340)

Fig. 3

(54) Title: METHOD FOR STATISTICS BASED PERFORMANCE OPTIMIZATION OF REGENERATED CODE

(57) Abstract: An automated method for optimization of stack software based on statistical analysis of performance and according to configuration parameters. The method includes generating the original code, collecting statistics of usage patterns and feeding back the results of the statistics to recreate and optimize the code. The method further includes regenerating the code, reloading the regenerated code into the system and returning to the statistics collection step, wherein the sequence of generating, collecting, feeding back, regenerating and reloading are reiterated continuously, such that the method continuously provides increasingly optimum code performance.
Published: 28 January 2010

Date of publication of the international search report: 28 January 2010

— with international search report (Art. 21(3))
INTERNATIONAL SEARCH REPORT

A. CLASSIFICATION OF SUBJECT MATTER

IPC: G06F 9/45(2006.01)

USPC: 717/151,158,159

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)

U.S. : 717/127, 130, 131, 151, 158, 159

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)

Please See Continuation Sheet

C. DOCUMENTS CONSIDERED TO BE RELEVANT

<table>
<thead>
<tr>
<th>Category</th>
<th>Citation of document, with indication, where appropriate, of the relevant passages</th>
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</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>US 6,971,091 B1 (Arnold et al.) 29 November 2005 (29.11.2005), Fig 2, column 2, lines 34-60, column 4, lines 3-7, column 5, lines 9-15, 56-67, column 6, line 6 - column 7, line 50, column 8, line 20 - column 13, line 2, column 14, line 41 - column 16, line 6.</td>
<td>1-4, 9, 10, 14-17</td>
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<td>Y</td>
<td>Fajardo &quot;Open Diameter Software Architecture&quot;, June 2004, <a href="http://diameter.sourceforge.net/diameter-architecture/index.html">http://diameter.sourceforge.net/diameter-architecture/index.html</a>, especially pages 1, 3-7.</td>
<td>5-8, 11-13, 18, 19</td>
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<td>Y</td>
<td>US 6,016,512 (Huitema) 18 January 2000, (18.01.2000), column 2, lines 34-41.</td>
<td>6, 7, 11-13, 18</td>
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Further documents are listed in the continuation of Box C. See patent family annex.

* Special categories of cited documents

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Date of the actual completion of the international search

16 August 2008 (16.08.2008)

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Mail Stop PCT, Attn: ISA/US
Commissioner for Patents
P.O. Box 1450
Alexandria, Virginia 22313-1450
Facsimile No. (571) 273-3201

Authorized officer

Lewis Bullock
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<td>Y</td>
<td>US 6,006,033 (Heisch) 21 December 1999 (21.12.1999), column 13, lines 50-57.</td>
<td>8, 19</td>
</tr>
</tbody>
</table>
Continuation of B. FIELDS SEARCHED Item 3:
East, Google Scholar, search terms: feedback/profile directed recompilation/optimization, diameter base protocol, code restructuring