Title: SURROGATE-BASED AND EXTENDS-BASED CONTEXT LOOK UP

BEGIN

RECEIVE CODE HAVING DEFINITIONS OF A NUMBER OF CLASSES, WHEREIN A DEFINITION OF A FIRST CLASS INCLUDES A REFERENCE TO A FIELD

COMPILE THE CODE, TO GENERATE AN EXECUTABLE, WHEREIN THE CODE INCLUDES VALIDATING THAT FIELD IS DEFINED IN THE CONTEXT OF THE FIRST CLASS, WHEREIN THE CONTEXT INCLUDES CLASSES THAT HAVE A SURROGATE RELATIONSHIP AND/OR AN EXTENDS RELATIONSHIP WITH THE FIRST CLASS

EXECUTING THE EXECUTABLE

FIG. 2

Abstract: Method, apparatus and systems for processing of code that include key fields having surrogate and extends relationships are described. In some embodiments, a method includes receiving a pattern language code having definitions of a number of classes, wherein a definition of a first class of the number of classes comprises a reference to a field (Item 202). The method also includes compiling the pattern language code to generate an object code, wherein the compiling comprises validating that the field is defined with a context of the first class. The context includes a second class of the number of classes that has a surrogate relationship with the first class (Item 204).
Published:
— with international search report

(88) Date of publication of the international search report:
6 November 2008
INTERNATIONAL SEARCH REPORT

International application No
PCT/US07/66093

A. CLASSIFICATION OF SUBJECT MATTER
IPC: G06F 9/44(2006.01)

USPC: 717/100
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. 717/100, 136-140

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)
EAST, ACM, GOOGLE. Search terms: class, definition, compile, execute.

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>
<th>Relevant to claim No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>US 6,675,377 A (Tanaka) 6 Jan 2004 (06.01.2004), col 9, lines 1-57</td>
<td>1-3-1</td>
</tr>
</tbody>
</table>

Date of the actual completion of the international search: 29 July 2008 (29 07 2008)
Date of mailing of the international search report: 31 JUL 2008

Form PCT/ISA/2 0 (second sheet) (April 2007)