

542, 544, 546, 548, 550, 552, 554, etc. Each section repeats for each named method grouping (category), which lists the name of the category, followed by several subsections, one for each method defined in the category. For each method, the method selector is listed, followed by a table. The table lists for that method the kinds of parameters for the method (in the form of qualifiers derived from this method's signature), the kind of object returned by the method (in the form of qualifier derived from the method's signature), a method description (derived from the method comment), a list of collaborators (derived from deducing all the collaborations in the method using the design virtual machine execution in the fashion described earlier (i.e., OSD collaboration deduction) and filtering them using the collaboration filter in the fashion previously described), the access (whether the method is defined as public or private), and whether the method must be overridden (by deducing whether the message 'self ImplementedBySubclass' is invoked by the method).

Although the present invention has been described with respect to the specific preferred embodiment thereof, various changes and modifications may be suggested to one skilled in the art, and it is intended that the present invention encompass such changes and modifications as falls in the scope of the appended claims.

I claim:

1. A method of diagraming collaborations deduced from a design virtual machine execution of a design of at least one method of an object oriented computer program, comprising the steps of:
 - performing said design virtual machine execution of a selected method, said performing step comprising the steps of:
 - creating a plurality of execution steps for said selected method; and
 - as directed by said execution steps, tracing through the design one execution step at a time, said step of tracing comprising the steps of:
 - fetching appropriate design information from an annotation of said selected method;
 - executing said execution step; and
 - checking a result of said executing step for design violations;
 - deducing one or more collaborations of said selected method from said performed design virtual machine execution; and
 - automatically diagraming said deduced collaborations on a computer display.
2. The method of claim 1, further comprising the step of: filtering said deduced collaborations by omitting any of said collaborations that appear in a predefined filter list.
3. The method of claim 1, wherein said step of automatically diagraming comprises:
 - automatically diagraming said deduced collaborations on a computer display in a Class/Responsibilities/Collaborators (CRC) report format.
4. The method of claim 1, wherein said step of automatically diagraming comprises:
 - automatically diagraming said deduced collaborations on a computer display in an Object Structure Diagram format.
5. The method of claim 1, wherein said step of automatically diagraming comprises:
 - automatically diagraming said deduced collaborations on a computer display in an Object Interaction Diagram format.

6. The method of claim 1, wherein said object oriented computer program comprises a set of "JAVA" applets.

7. The method of claim 1, wherein said deducing one or more collaborations step further comprises the step of deducing transient collaborations.

8. A system for diagraming collaborations deduced from a design virtual machine execution of a design of at least one method of an object oriented computer program, comprising:

means for performing said design virtual machine execution of a selected method, said means for performing comprising:

means for creating a plurality of execution steps for said selected method; and

means for tracing through the design one execution step at a time, as directed by said execution steps, said means for tracing comprising:

means for fetching appropriate design information from an annotation of said selected method;

means for executing said execution step; and

means for checking a result of said means for executing for design violations;

means for deducing one or more collaborations of said selected method from said performed design virtual machine execution; and

means for automatically diagraming said deduced collaborations on a computer display.

9. The system of claim 8, further comprising:

means for filtering said deduced collaborations.

10. The system of claim 8, wherein said means for automatically diagraming comprises:

means for automatically diagraming said deduced collaborations on a computer display in a Class/Responsibilities/Collaborators (CRC) report format.

11. The system of claim 8, wherein said means for automatically diagraming comprises:

means for automatically diagraming said deduced collaborations on a computer display in an Object Structure Diagram format.

12. The system of claim 8, wherein said means for automatically diagraming comprises:

means for automatically diagraming said deduced collaborations on a computer display in an Object Interaction Diagram format.

13. The system of claim 8, wherein said object oriented computer program comprises a set of "JAVA" applets.

14. The system of claim 8, wherein said means for deducing one or more collaborations step further comprises means for deducing transient collaborations.

15. A computer program product recorded on computer readable medium for diagraming collaborations deduced from a design virtual machine execution of a design of at least one method of an object oriented computer program, comprising:

computer readable means for performing said design virtual machine execution of a selected method, said computer readable means for performing comprising:

computer readable means for creating a plurality of execution steps for said selected method; and

computer readable means for tracing through the design one execution step at a time, as directed by said execution steps, said computer readable means for tracing comprising:

computer readable means for fetching appropriate design information from an annotation of said selected method;