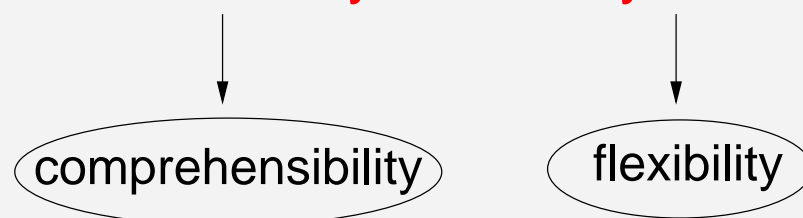


8. Conclusion

We have shown an approach for Java reverse engineering with UML class diagrams as output.

Emphasis:

- elements **beyond mere fields and methods**:
 - association cardinalities
 - compositions
 - query methods
- obtained through **intuitive analyses** on **bytecode**



Implementation available:

class2uml

(see the [class2uml] reference below)

Our work seems to complement several existing facilities (see page 7).

References

| | | |
|-------------|--|---|
| [class2uml] | implementation of this work | http://www-i2.informatik.rwth-aachen/~markes/class2uml/ |
| [argouml] | Open Source software engineering suite | Linus Tolke et al.: <i>ArgoUML</i> . http://argouml.tigris.org/ |
| [fujaba] | tool suite for Java roundtrip engineering | Software Engineering Group, University of Paderborn: <i>Fujaba</i> . http://www.fujaba.de/ |
| [java2uml] | a reverse engineering tool for Java bytecode | Jan Pechanec: <i>Reverse Engineering of Programs in Java Language</i> , Master Thesis, University of Prague, 2002. http://www.sweb.cz/pechanec/Java2UML/ |
| [idea1] | on reverse engineering of various UML elements, strongly related to the tool | Martin Gogolla, Ralf Kollmann: <i>Re-Documentation of Java with UML Class Diagrams</i> . http://www.db.informatik.uni-bremen.de/publications/Gogolla_2000_euroREF.ps |
| [idea2] | IDEA | Ralf Kollmann, Martin Gogolla: <i>Applications of UML Associations and Their Adornments in Design Recovery</i> , Proceedings of the 8th Working Conference on Reverse Engineering. http://www.db.informatik.uni-bremen.de/publications/Kollmann_2001_WCRE.ps |
| [stevens] | handy user's guide to the UML | Perdita Stevens with Rob Pooley: <i>Using UML. Software Engineering with Objects and Components</i> , Addison-Wesley, 1999, ISBN 0-201-64860-1. |