

## Identifier Dictionary

- Bachelor thesis
- Master thesis

### Context

Approximately 70% of the source code of a software system consists of identifiers. Hence, the names chosen as identifiers are of paramount importance for the readability of computer programs and therewith their comprehensibility. However programming languages allow programmers to use almost arbitrary sequences of characters as identifiers which far too often results in more or less meaningless or even misleading naming. Coding style guides address this problem but are usually limited to general and hard to enforce rules like "identifiers should be self-describing".

A concept and prototypical Eclipse plugin to support consistent naming has been developed at TU München in the past (see "Concise and Consistent Naming", Pizka & Deißeböck 2006). The idea of this "IDD" was to collect information about the identifiers used in a project, to allow to add further descriptions and to browse and to refactor identifiers across multiple declarations. However, the implementation never made it into practical use, lacked some useful features and is now technically outdated.

### Goals

The goals of this thesis are to

- design and implement a new version of the IDD basing upon a recent Eclipse version
- design and implement additional useful features, such as analyses and refactorings on words (parts of identifiers) and more sophisticated rule checkers and warnings
- test the new IDD together with development teams at itestra GmbH.

Possible extension (depending on the kind of thesis): introduce the tool in 1-3 real development projects at itestra, gather feedback, optimize and assess the usefulness and report about this in the thesis.

### Company profile

This project is offered in cooperation with itestra GmbH ([www.itestra.de](http://www.itestra.de)). itestra GmbH is an independent, innovative software solution provider and consultancy. Its services include business process analysis, development of core software systems as well as renovation, optimization and migration and strategic consulting.

### Supervisor (itestra GmbH)

Jonathan Streit ([streit@itestra.de](mailto:streit@itestra.de))