

Source Code Exploration with Google

Denys Poshyvanyk, Maksym Petrenko,
Andrian Marcus, Xinrong Xie, Dapeng Liu

SEVERE Group @



Issues in concept location

- Simple and efficient methods -> poor precision and recall
- Complex methods -> higher precision and recall at the cost of efficiency

IR based concept location

- Uses Latent Semantic Indexing to index and search the source code
- Problems with the prototype
 - slow
 - inefficient re-indexing
 - no resources to support and adoptable version

Solutions for adoption

- Industry grants
 - not always fits our research agenda
- Component based approach with industrial strength COTS

Remember WCRE2004



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Google zoeken

Ik doe een gok

Het web doorzoeken Zoeken in pagina's in het Nederlands

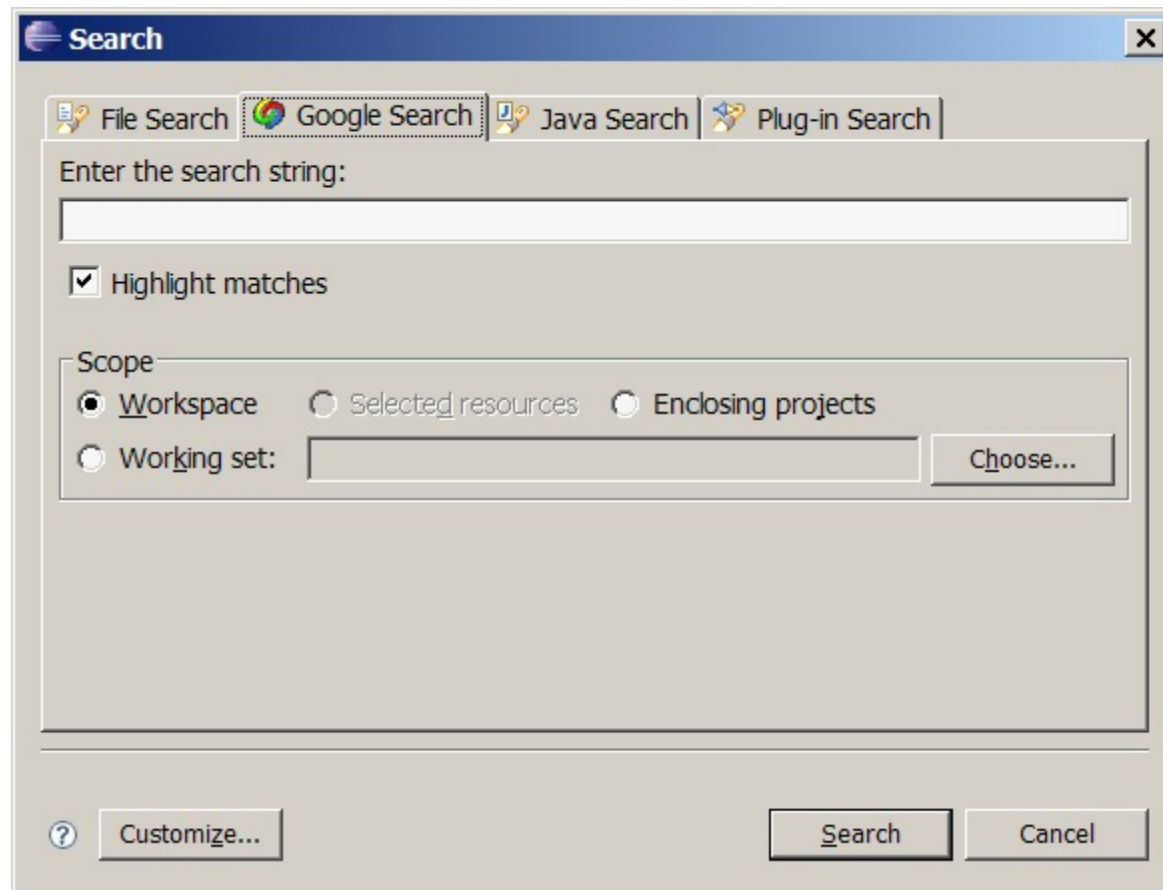
Google Eclipse Search (GES)



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GES interface



GES results

The screenshot shows the Eclipse IDE interface with the following components:

- GES Toolbar:** Located at the top left, it contains various icons for file operations and development tools.
- Highlighted Source Code:** The main editor window displays the source code for `ArrowHeadEditor.java`. The string `"Black Diamond"` is highlighted in green in the first line, and the constant `BLACK DIAMOND` is highlighted in green in the `values` array.
- Search Results:** The Tasks window at the bottom right shows the search results for `Black Diamond`. It lists 6 matches in the workspace:
 - `ArrowHead.java` - Violet/com/horstmann/violet (3 matches)
 - `ArrowHeadEditor.java` - Violet/com/horstmann/violet (2 matches)
 - `ClassDiagramGraph.java` - Violet/com/horstmann/violet

Advantages

- Support of natural language queries
- Scalability, efficiency, and reliability
- Sorting results by relevance
- Search in intra- and extra-net
- Improves as GDS does

Issues

- Granularity - files only
- Opaque/proprietary implementation - we do not really know how GDS works

Availability

- Free
- <http://ges.sourceforge.net/>