Spoofax vs Xtext

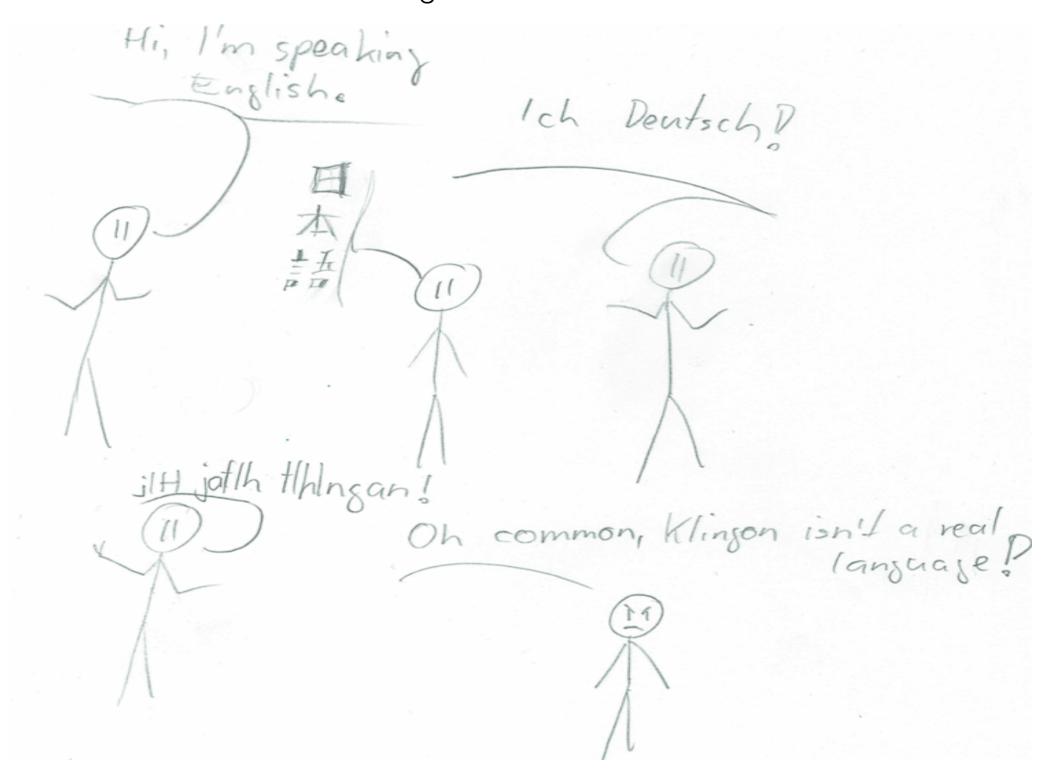
A language workbench comparative case study

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*Ingredients of a DSL:

Parser 2. Semantic analysis 3. Transformations 4. Code generator 5.
 Integration to an IDE



The Spoofax Language Workbench Rules for Declarative Specification of Languages and IDEs, Lennart C. L. Kats, Eelco Visser, 2010

What is a language workbench?

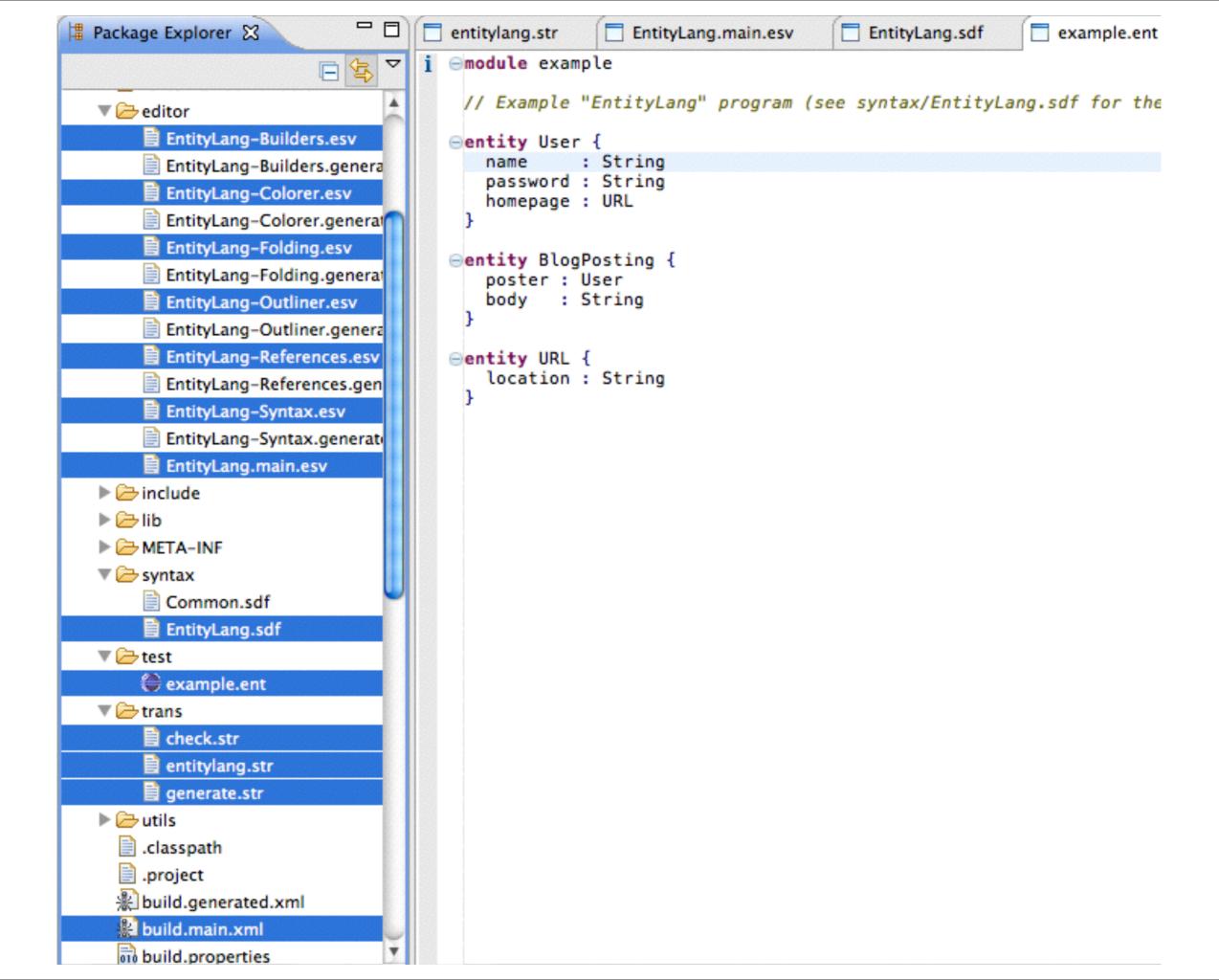
A tool that supports DSL creation not just in terms of parsing and code generation but also in providing a better editing experience for DSL users.*



^{*} M. Fowler. Language workbenches: The killer-app for domain specific languages http://martinfowler.com/articles/languageWorkbench.html, 2005

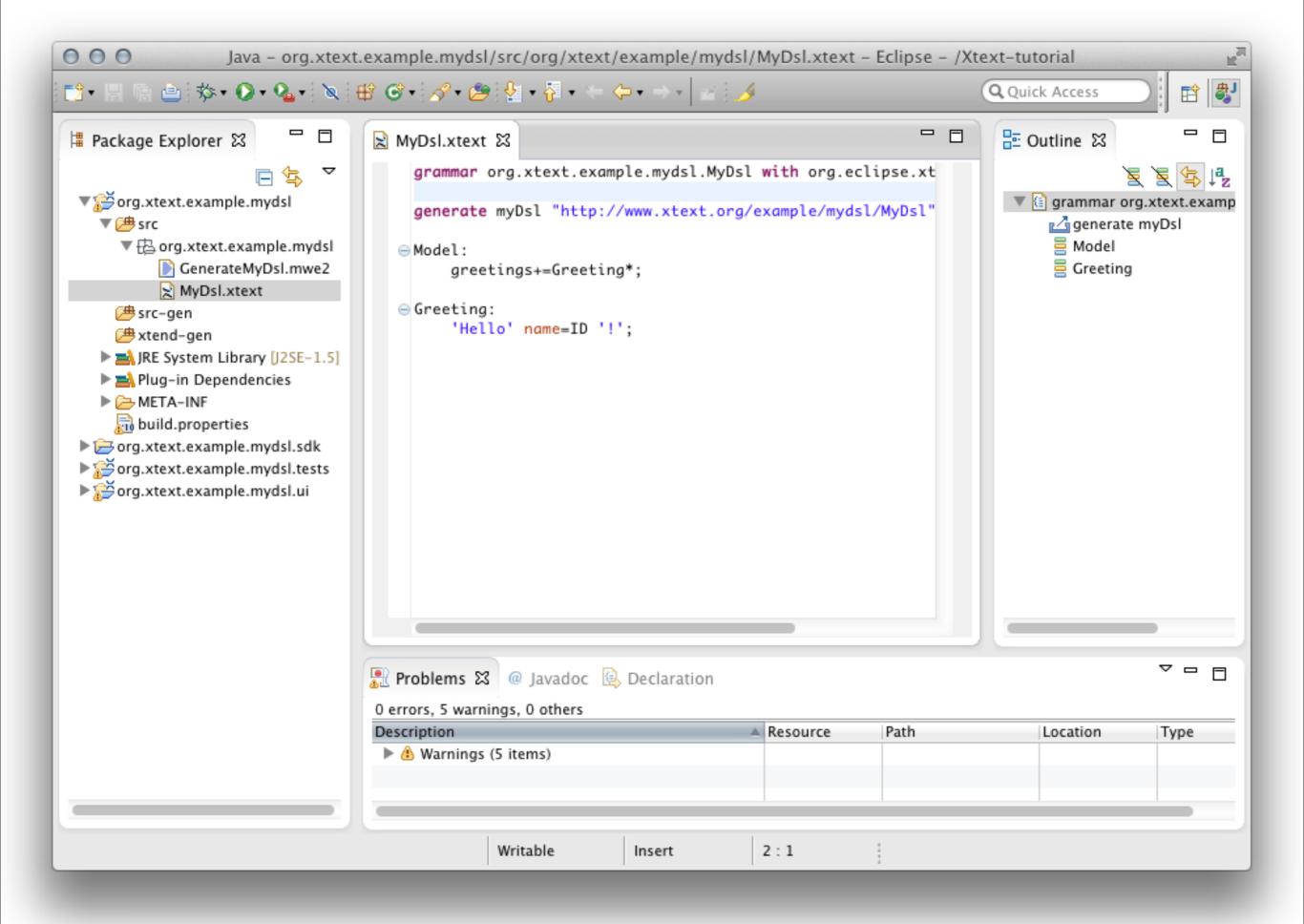
Spoofax

- On top of Eclipse
- Text based approach to building DSLs
- SDF to define grammars
- Stratego transformation language
- Editor language



Xtext

- Also built on Eclipse
- Tight integration with EMF
- Xtend for code generation
- Java for constraint checking



Reading Material

- The Spoofax Language Workbench Rules for Declarative Specification of Languages and IDEs, Lennart C. L. Kats, Eelco Visser
- Stratego: A Language for Program Transformation based on Rewriting Strategies System Description of Stratego 0.5, Eelco Visser
- A Comparison of Tool Support for Textual Domain-Specic Languages, Michael Pfeier, Josef Pichler
- Comparing Language Workbenches, Roman Stoffel
- http://strategoxt.org/Spoofax
- http://www.eclipse.org/Xtext/index.html
- http://www.languageworkbenches.net

Remaining work

- Determine comparison criteria
- Create and define a small DSL language to have a fair amount of results for the comparison
- Develop the DSL in the respective tools and write a paper on the process and results

