A Pattern-based Approach to DSL Development

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Current DSL development

- Good tool support reduces implementation effort
- DSLs become applicable in many business contexts

- Major effort used for requirements elicitation
- Lack of language engineering guidelines
- DSL development creatively driven
- Outcome of DSL development not predictable
Idea

- **Pattern-based DSL Development**

  - Patterns capture best practices
  - Stepwise application of patterns yield metamodel
  - DSL development becomes systematic & predictable
  - Language elements are traceable to requirements
DSL Development Workflow

1. Requirements Elicitation
2. Use Case Documentation
3. Metamodel Definition
4. Presentation Definition
5. DSL Backend Development
Description of a Language Pattern

- Name: ...
- Problem: ...
- Context: ...
- Forces: ...
- Solution: ...
- Rationale: ...
- Related Patterns: ...
Case Study
Use Cases & Language Elements
Case Study
Pattern Application
Case Study

Pattern Application
Case Study

Resulting Metamodel
Questions?