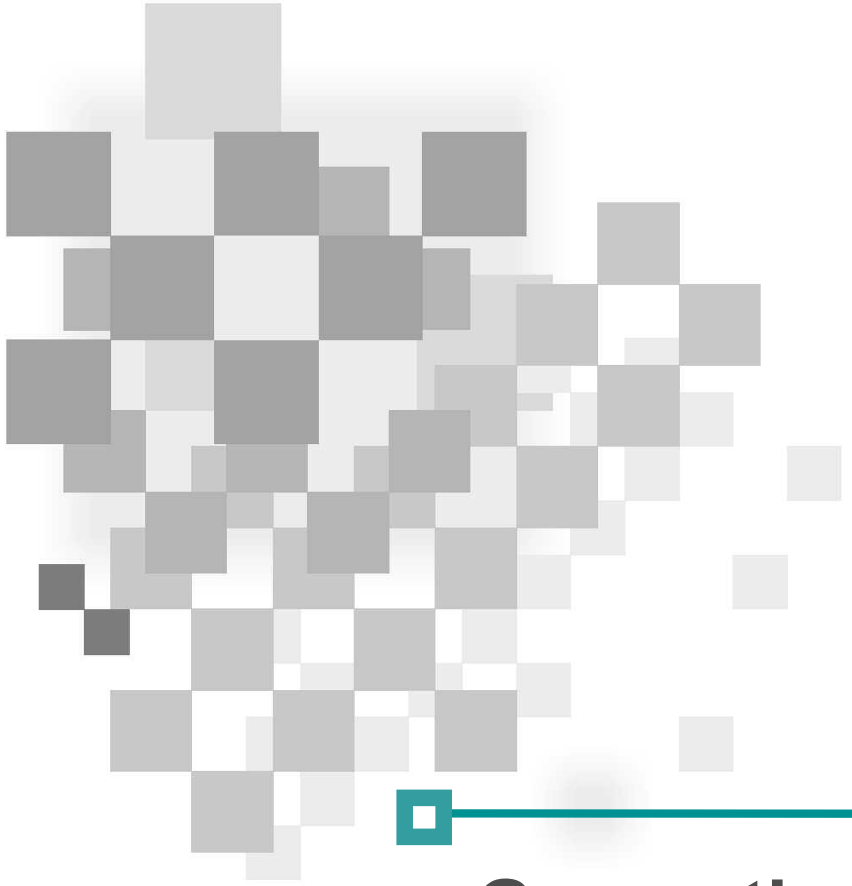
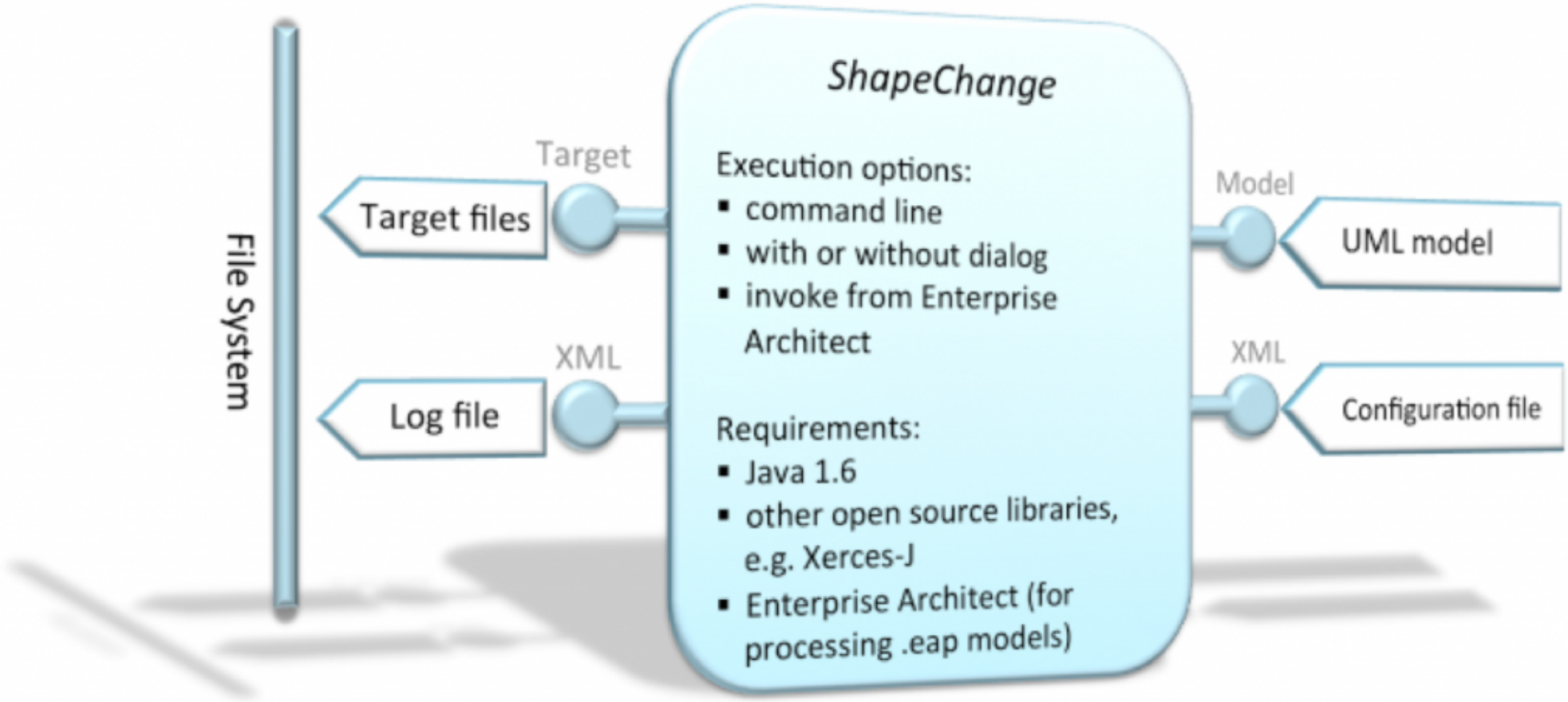


interactive instruments

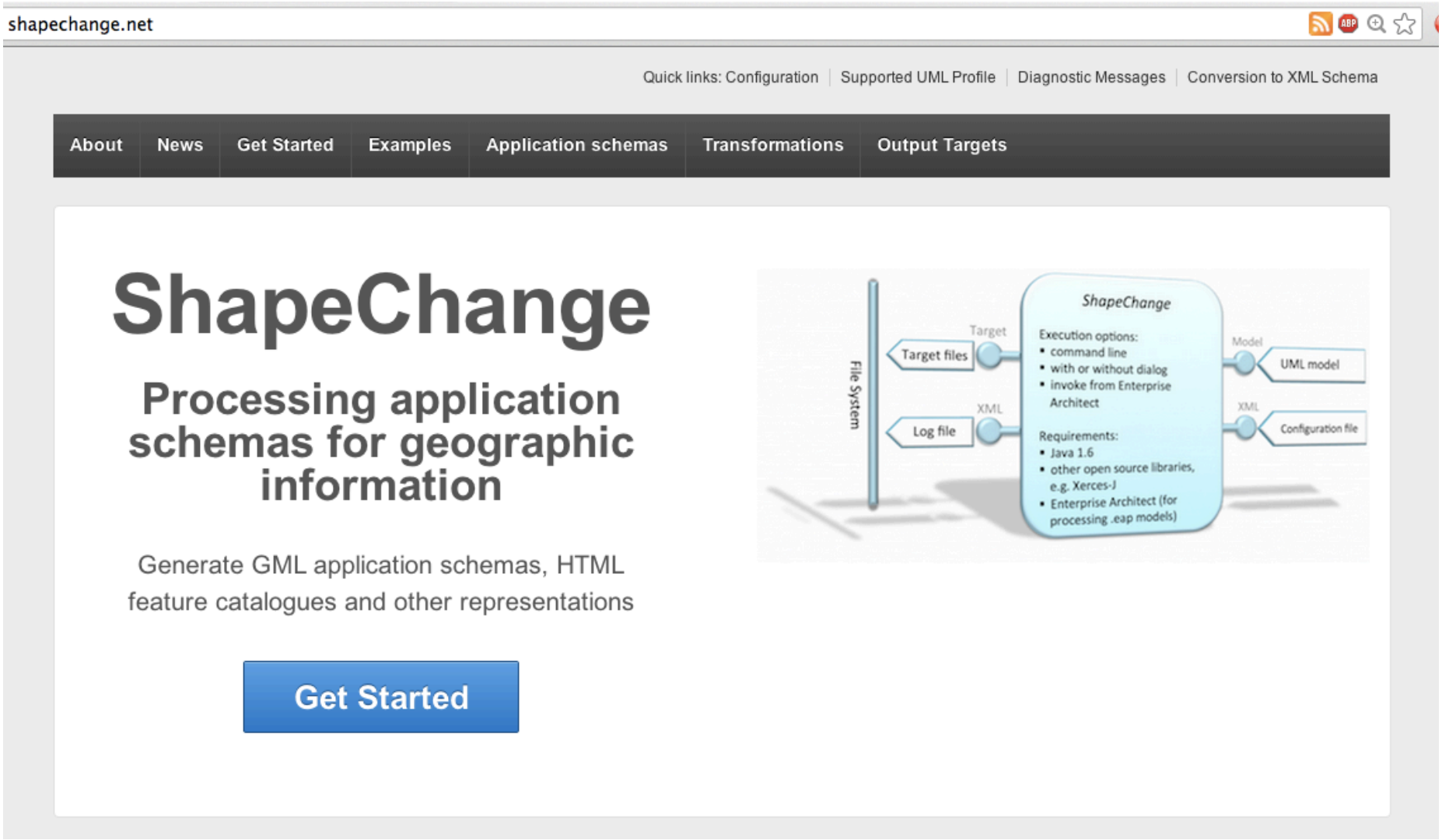
Generating documentation from UML models using ShapeChange

ISO/TC 211 Workshop - Automatic generation of documentation from UML models

ShapeChange takes application schemas constructed according to ISO 19109 and derives implementation representations



Documentation and the software is available at http://shapechange.net/



ShapeChange options

Input options:

- an Enterprise Architect project file
- an XMI 1.0 document
- a GSIP Microsoft Access Database

Transformer options:

- Profiler
- Flattener

Output targets:

- XML Schema
  - Schematron
- Feature Catalogues
- RDF/OWL/SKOS
- JSON Schema
- Enterprise Architect project file
- SQL DDL (under development)
- etc.

Feature Catalogues

- Designed for feature catalogues according to ISO 19110
- … but works with other UML models, too, if they use a compatible UML profile
- Currently does not process diagrams in the model
- Implemented mainly as the EA reporting tools at the time did not address some needs
- Current output formats:
  - HTML (single HTML document or frame-based HTML)
  - DOCX
  - GFC (ISO 19110 XML)
- Two-step process
  - Create internal XML format
  - Apply XSLTs to generate desired output formats

Demo

- Use ISO/DIS 19135-1 model as input
  - Apply changes to reflect conformance classes (NB: should also be corrected in the Harmonized Model)
- Step 1: Create DOCX output using standard DOCX XSLT of ShapeChange xslt/docx.xsl
  - → Configuration file 19135_doc_config1.xml
  - → DOCX template template.docx
  - Run ShapeChange
  - → DOCX result output1/INPUT/19135.docx

Demo

- Step 2: Create DOCX output using adapted DOCX XSLT xslt/docx-compact.xsl for more compact "ISO-19115-like" representation
  - XSLT supports flexible changes to the output template
    - Requires knowledge about XSLT and DOCX
    - Time needed to develop XSLT: 1.5 hours (without prior experience with DOCX)
  - Same configuration file except different XSLT 19135_doc_config2.xml
  - Same DOCX template template.docx
  - Run ShapeChange
  - → DOCX result output1/INPUT/19135.docx

Questions?

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