Xtext vs. MPS: Decision Criteria

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Textual vs. Projectional: Decision Criteria

Strumenta Community

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Loose distinction: “If you directly edit what’s written on disk, it’s textual.”

Textual

- ANTLR
- MontiCore
- Racket
- Rascal
- Spoofax
- Xtext

Projectional

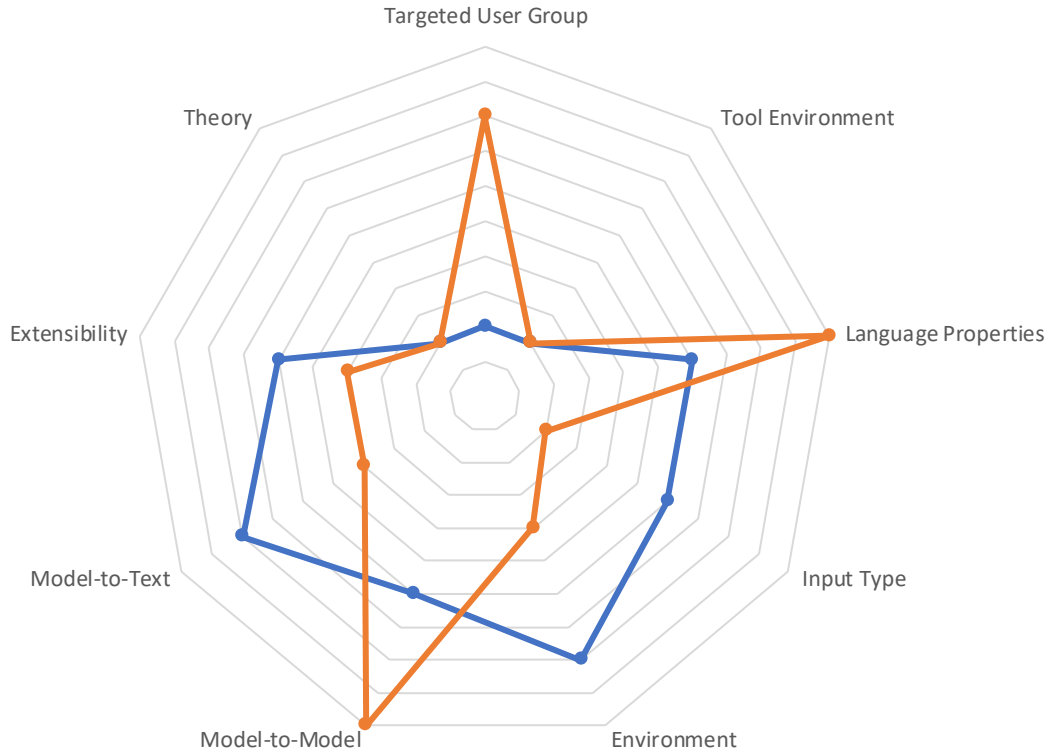
- MetaEdit+
- MPS
- Sirius

No killer arguments, but criteria to think about

- Both Xtext and MPS have strengths and weaknesses
- Consider + balance several criteria

→**Use right tool for *this* job**

(Might be different tool for next job)



Targeted User Group

Developers

- used to IDE features
- more similar to other IDEs, especially in source code handling
- better integration in existing tool landscape

→ Xtext

Business

- main competitor: Excel
- profit more of MPS features

→ 

Tool Environment

- Eclipse
- EMF

→ Xtext

- Nothing reusable

→ MPS

Language Properties

- established text-based language
- no tabular structures

→ Xtext

- profits from different editors
- requires different viewpoints
- tight integration of separate languages
- unparsable

→ MPS

Input Type

(free) text

→ Xtext

- structured
- guided
- pre-defined
- restricted

Examples:
forms, steps / wizards, trees

→ MPS

Environment

- web (at least as option)
- tight integration with other tools (workflow, arcane versioning, etc.)

→ 

- desktop
- loose integration with other tools

→ 

Transformations: Model-to-Model

- leverage existing technologies
- re-use existing transformations

→ Xtext

- lots of intermediate languages
- extensible transformations

→ MPS

Transformations: Model-to-Text

- tight control of output required
- (close to) target language available

→ Xtext

→ MPS

Extensibility

- discouraged
- single tool / language vendor

→ Xtext

- encouraged
- multiple vendors / community

→ 

Conceptual Framework / Theory

- Well-researched since 70s
- Based on solid theory
- Several comparable, stable, usable implementations

→ Xtext

- Theory: ?
- Usable implementations proprietary*, hard to compare

*although often Open Source

→ MPS