

Feedback: Interpreting and debugging in MPS

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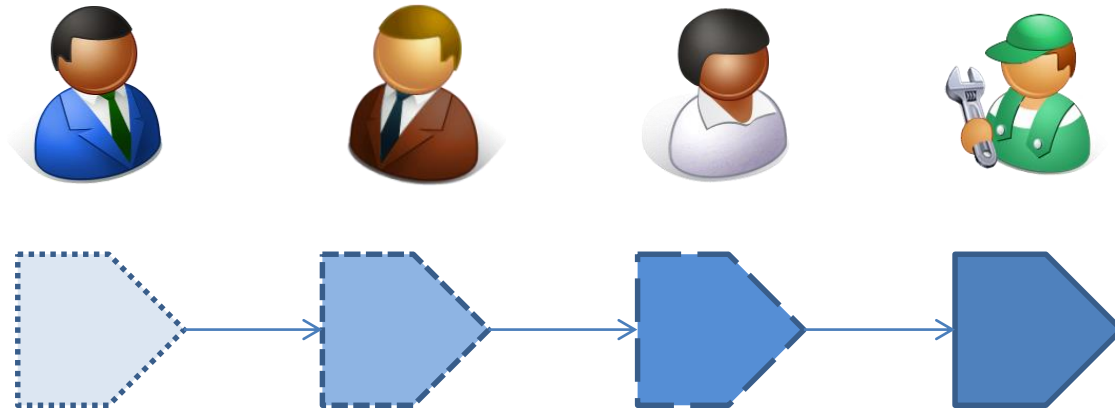
DSLs for law execution

- Holy grail:
 - Model the law
 - Model policies
 - Generate the code

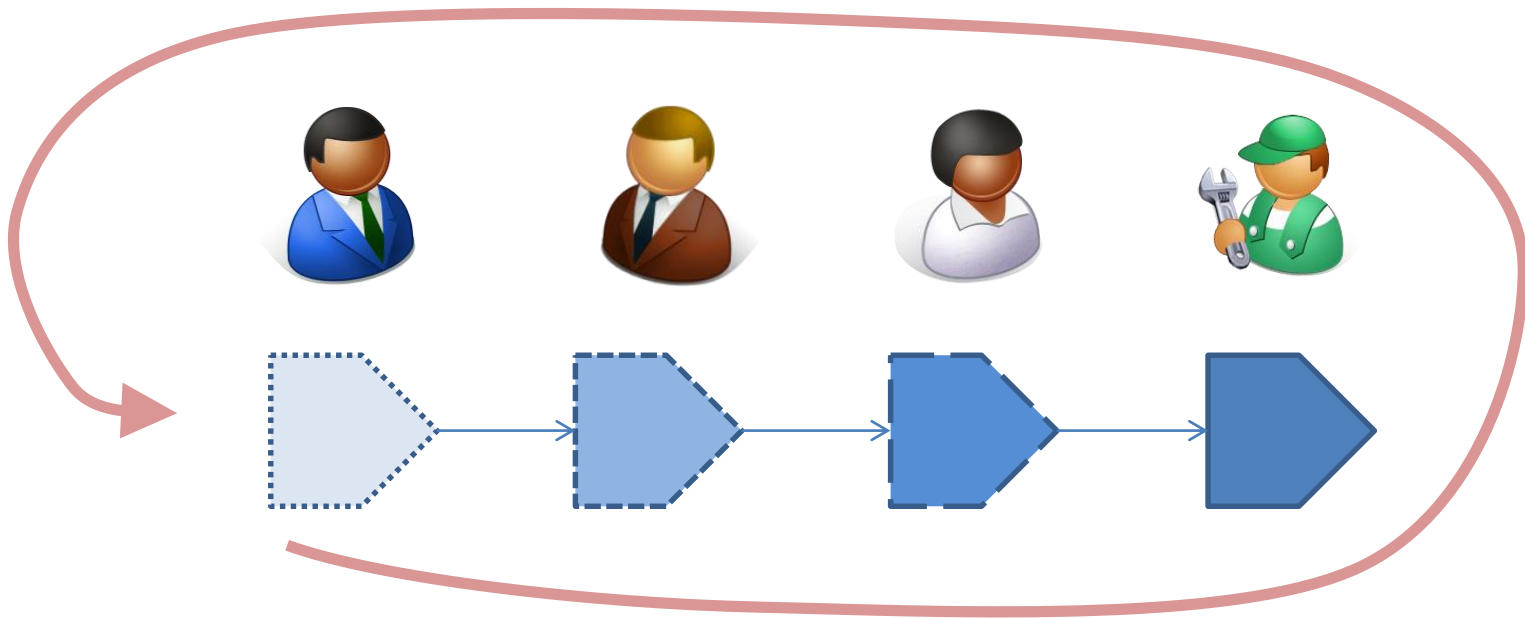
Modelling law

- Formalizing law articles using controlled natural language
 - Combines intuitive and formal meaning
- Checking the formal meaning using examples
- Explaining results

Development pipe line

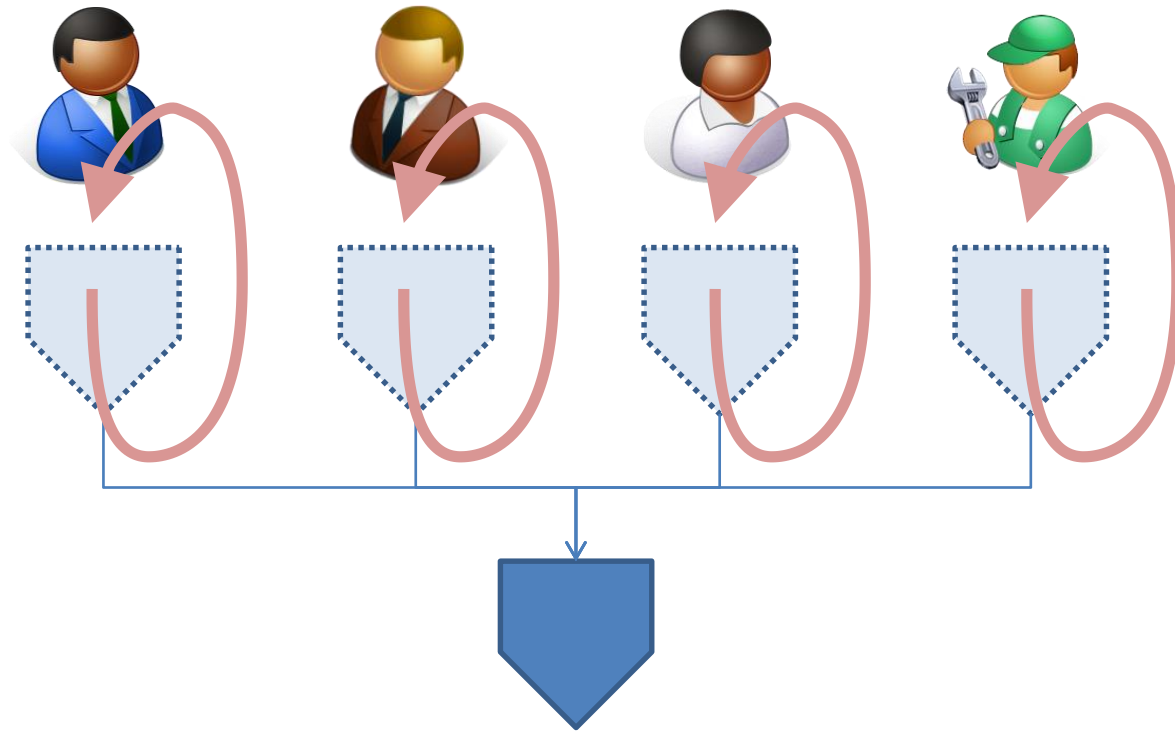


Development pipe line



One long and slow feedback cycle involving all aspects

Separation of concerns



Decomposition

- Decompose the domain
- Abstraction
- What if ...
 - We could use an infinitely fast computer with infinite persistent memory?
 - We knew everything?
 - We had no temporal constraints?
- DRY

Concern oriented DSLs

- Law
- Execution
 - How do we gather/deal with information
- Conceptual models
 - Facts vs statement vs data
 - Time aspects
 - Data sources
 - Reliability of data
- Accountability
 - Tracing rules
- Technology
 - Databases, services, network latency, scalability, performance

Feedback

- Model checks
 - Type checking
 - Scoping rules
 - Static analysis
- Interpretation
 - Comparison to predictions
 - Explanations (debug traces)

Demo

Questions?

