

Parsing Composed Grammars with Language Boxes

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Our problem



Titian: Sisyphus

Our problem



Titian: Sisyphus

Designing a perfect programming language

We want **better** programming languages

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But better always seems to end up **bigger**

A solution?



Titian: Pesaro Madonna

A solution?



Titian: Pesaro Madonna

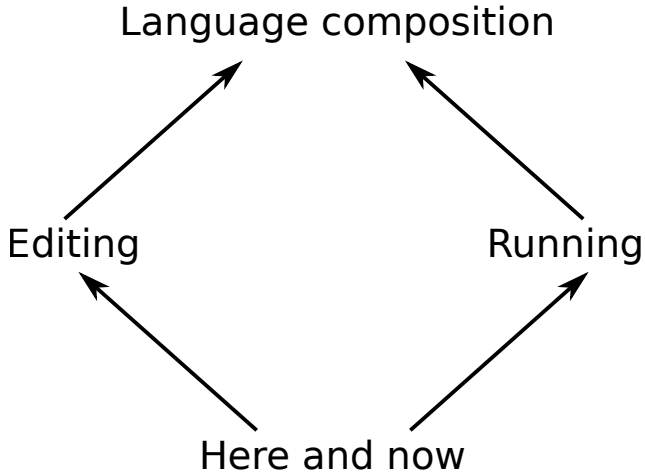
Language composition as salvation?

Language composition
△
mixing languages together

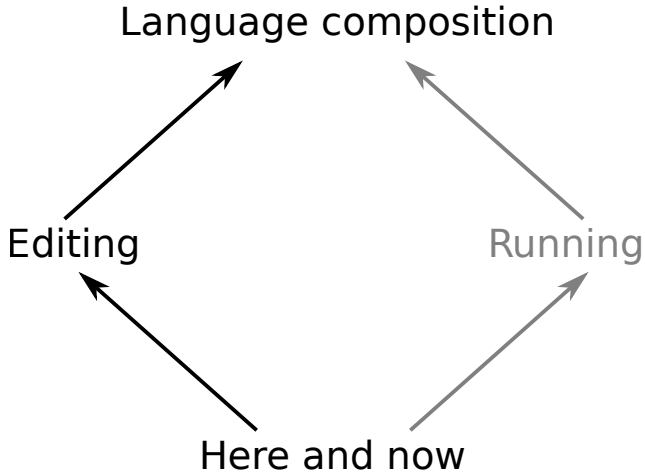
Language composition

Here and now

Roadmap



Roadmap



Should be easy

- **LR**
- **Earley**
- **PEG**

- **LR** composition undefined (in general).
- **Earley**
- **PEG**

- **LR** composition undefined (in general).
- **Earley** composition ambiguous (in general).
- **PEG**

- **LR** composition undefined (in general).
- **Earley** composition ambiguous (in general).
- **PEG** composition can shadow (in general).

The only choice?

SDE

Challenge:
SDE's power +
a text editor feel?

Demo

Summary



Designing a perfect programming language

Summary



Language composition as salvation?

Parsing: problematic

Parsing: problematic

SDE: intolerable

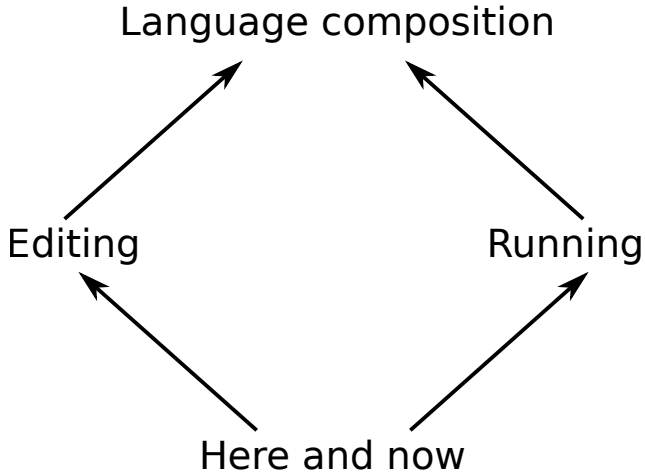
Incremental parsing + language boxes

Incremental parsing +
language boxes

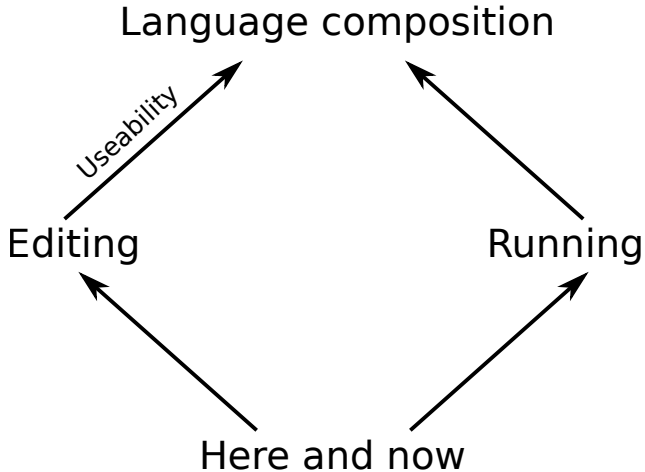


Feel of traditional text editing +
SDE-like functionality

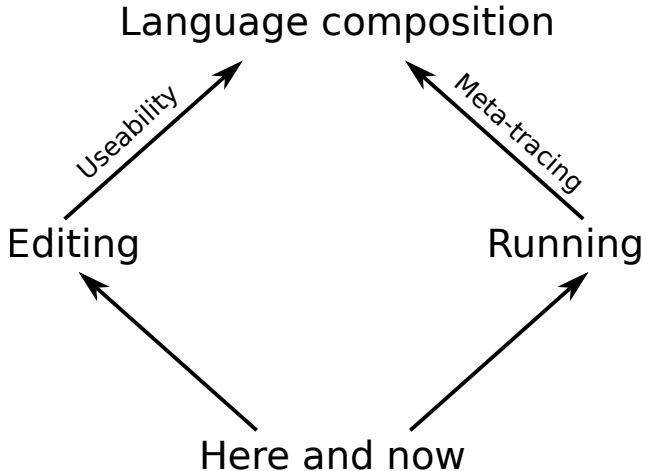
What's next



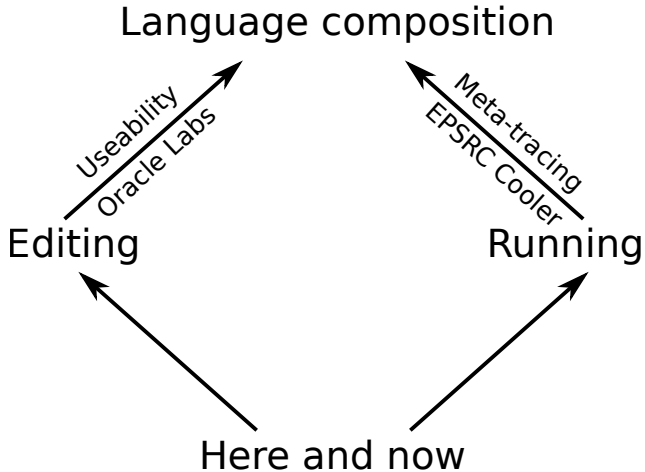
What's next



What's next



What's next



Thank you for listening

`http://soft-dev.org/`