

Fine-grained language composition



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Language composition



Why do we need language composition?

Why do we need language composition?

Code migration

Why do we need language composition?

Language composition is already widely used

Why do we need language composition?

Language composition is already widely used

...in a very basic way

Incremental parsing

- detect changes in sourcecode

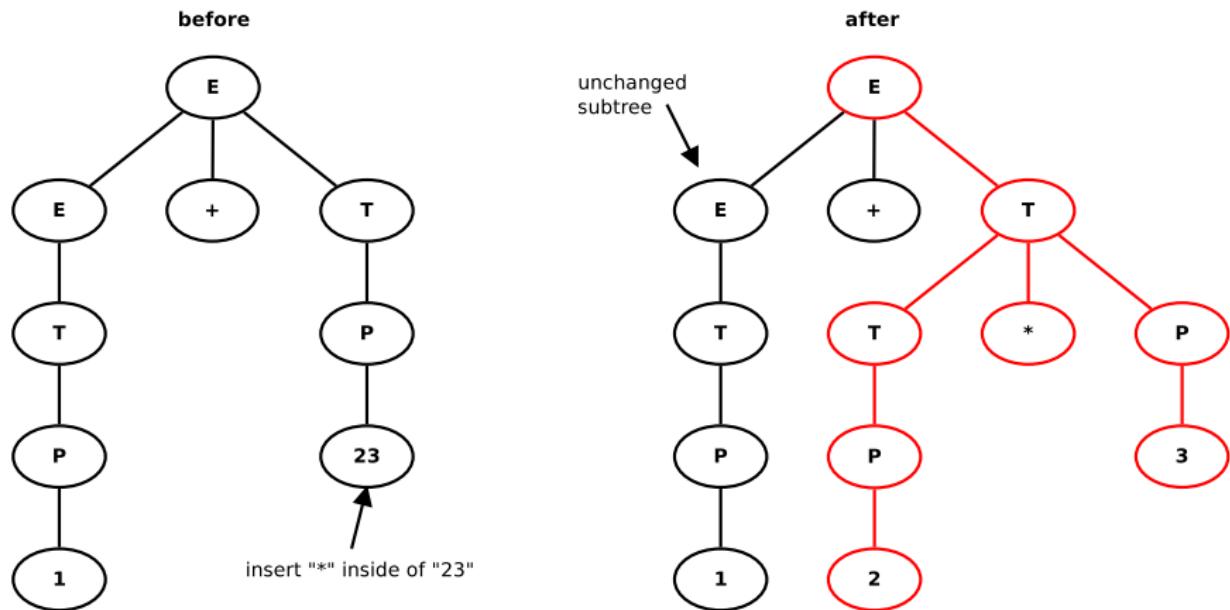
Incremental parsing

- detect changes in sourcecode
- only update affected subtrees

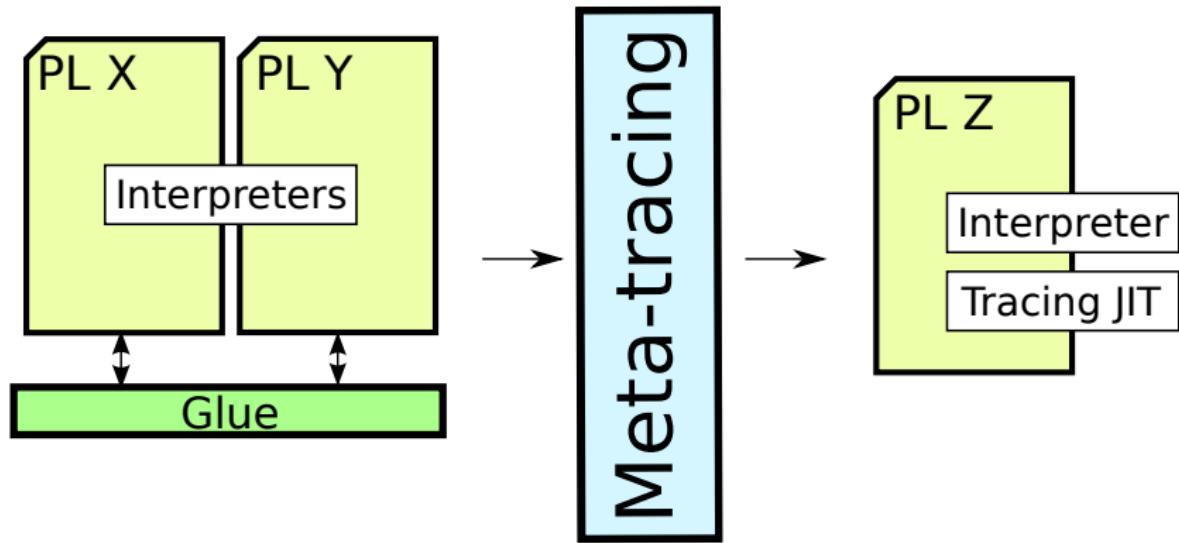
Incremental parsing

- detect changes in sourcecode
- only update affected subtrees
- reuse everything else from previous parsetree

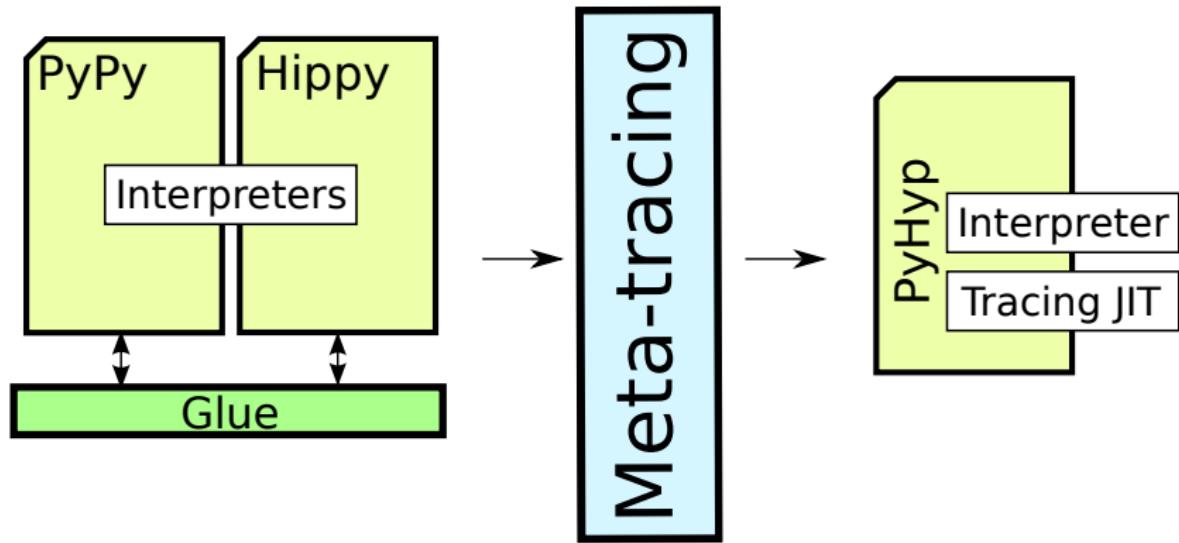
Incremental parsing



Meta-tracing interpreter composition



Meta-tracing interpreter composition



Thanks for listening

Eco - Editor for language composition

File Edit Project View Window Help

javaframe.eco* [No name]*

```
1: import java.sql.statements;
2: class Test {
3:
4:     public int id = 1;
5:
6:     public static void main(String args[]){
7:         int x = SELECT id FROM table;
8:     }
9:
10: }
```

Parsing Status

- Java + SQL + Chemical
- SQL.ref.Java express...

Eco - Editor for language composition

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javaframe.eco* [No name]*

Parsing Status

- PHP + Python
- Python + PHP

```
1: $a = array(1,2,3);
2:
3: print_r($a);
4:
5: def foo():
6:     print [x**2 for x in a.as_list()]
7:
8: foo();
```

<http://soft-dev.org/>