

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

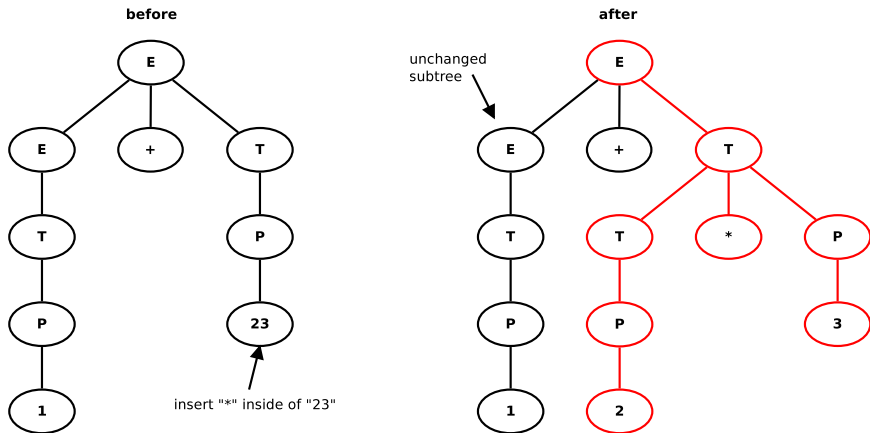
Incremental parsing

- detect changes in sourcecode
- only update affected subtrees

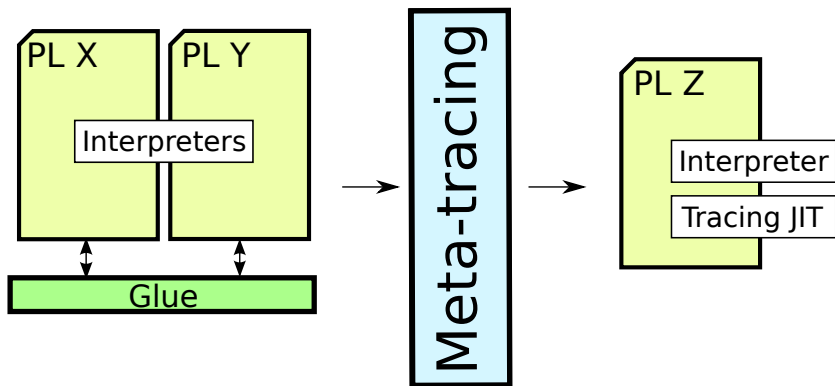
Incremental parsing

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

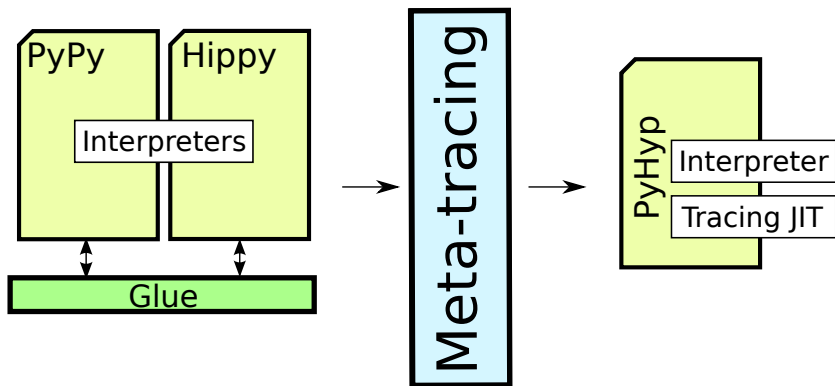
Incremental parsing



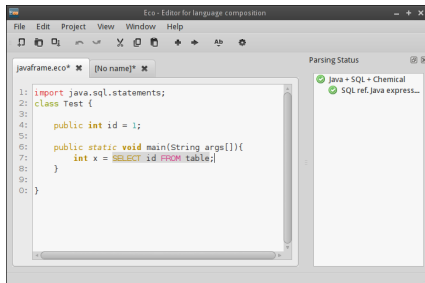
Meta-tracing interpreter composition



Meta-tracing interpreter composition



Thanks for listening



The screenshot shows the Eco Editor interface with a Java file named 'javaframe.eco'. The code is as follows:

```
1: import java.sql.statement;
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: }
```

The 'Parsing Status' panel on the right shows the following:

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



The screenshot shows the Eco Editor interface with a PHP file named 'javaframe.eco'. The code is as follows:

```
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();
```

The 'Parsing Status' panel on the right shows the following:

- ✓ PHP + Python
- ✓ Python + PHP

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