

Teaplet Weekly Progress, 12.05.2011

This week, we tried to implement some sort of tree search algorithms that will be useful for us to find a node on the generated tree representation of the sourcecode. When the output of the javaML read into memory, we have a hierarchical tree representation of the sourcecode. Although we have the list of the generated elements, we will need those search algorithms to determine the scope of the elements. We also tried to generate some unique general ID's, like:

For a class like:

```
class Hede extends Applet{
    public int a = 2;
    public void change(){
        this.a = 4;
    }
}
```

The generated output will be:

```
... // Some lines are omitted
<field name="a" id="LHede;a" idkind="field">
  <modifiers>
    <modifier name="public"/>
  </modifiers>
    <type name="int" primitive="true"/>
    <var-initializer>
      <literal-number kind="integer" value="2"/>
    </var-initializer>
</field>

... // Some lines are omitted
<assignment-expr op="=">
  <lvalue>
    <field-set name="a">
      <this/>
    </field-set>
  </lvalue>
  <literal-number kind="integer" value="4"/>
</assignment-expr>
```

Now there exists a problem here. We expected that, the tag "field-set" with an id that refers the field name "a". But it cannot be like that. It cannot come with an "id" attribute like some other tags. So we tried to generate some unique ID's to elements like: "LHede;a"
Those problem arises from here that same code segment, but written differently:

```
class Hede extends Applet{
    public int a = 2;
    public void change(){
        a = 4; // this.a erased
    }
}
```

The generated output will be:

```
... // Some lines are omitted
<assignment-expr op="=">
    <lvalue>
        <field-set name="a" idref="LHede;a" idkind="field">
            <this/>
        </field-set>
    </lvalue>
    <literal-number kind="integer" value="4"/>
</assignment-expr>
```

The above xml segments refers to the same code, but generates different outputs. So we tried to generalize those first.