YaFSM Generator

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Goals

- Open Source FSM Generator for C++ and Java
- Generation of Code
- Free Generation of State visualisation
- (Non-Free) Graphical Editor Frontend

Design Goals

- Hierachical State Engine without Memory
- Trigger with parameter
- Conditional state transitions
- State enter and exit actions
- State transtition actions
- State self transitions without state exit/enter
- Timers, Events, Attributes

Generator input

- Simple XML file as input for generator
- XSD definition
- Graphical Editor for XML file

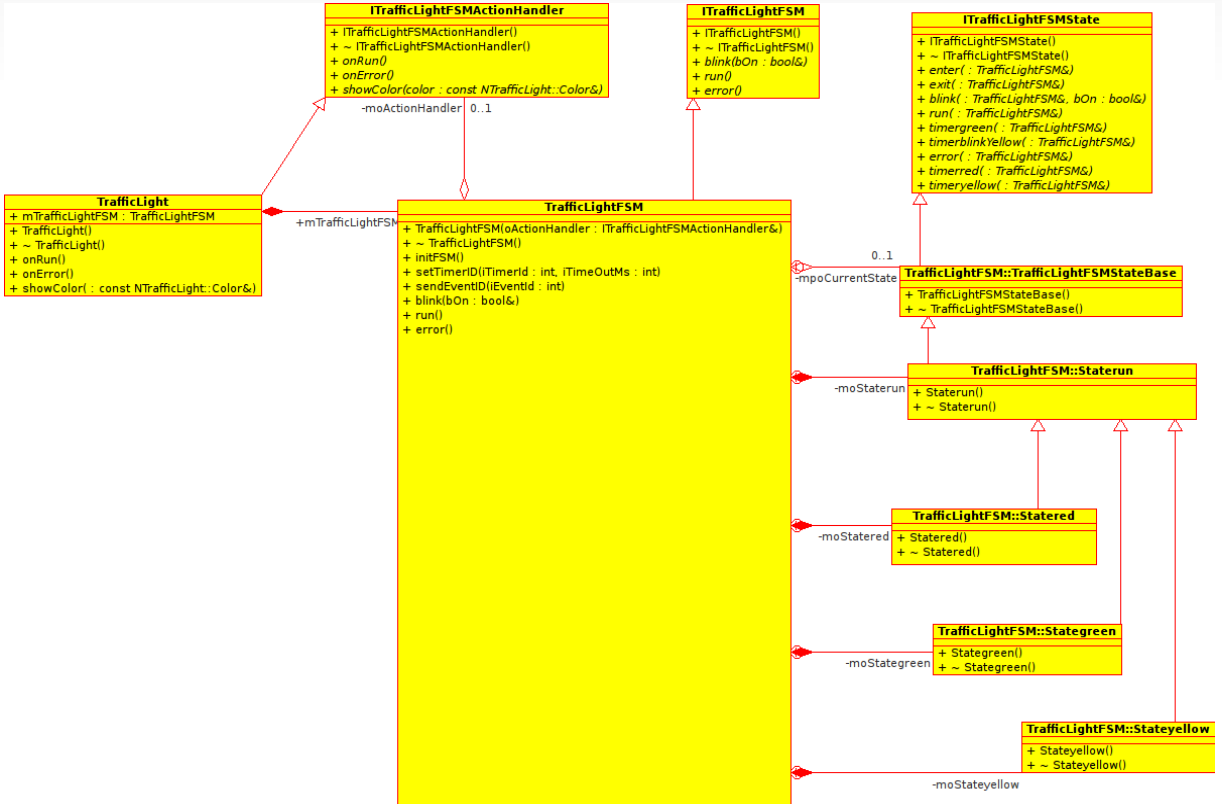
```
<root>
<definitions>
  <action name="onEnterRun" param=""/>
  <action name="onExitRun" param=""/>
  <trigger name="run" param=""/>
  <trigger name="end" param=""/>
</definitions>
<fsm>
  <state name="stop" type="entry"/>
  <state name="run" enter="onEnterRun()" exit="onExitRun()">
    <state name="stopping" type="entry"/>
    <state name="running"/>
    <transition trigger="run" begin="stopping" end="running" condition=""/>
    <transition trigger="end" begin="running" end="stopping" condition=""/>
  </state>
 <transition trigger="run" begin="stop" end="run" condition=""/>
  <transition trigger="end" begin="run" end="stop"/>
</fsm>
</root>
```

Generator

- Perl Script to generate C++ classes
- Code templates for C++ classes for Timer and Events
- Planed: Java generator for C++ and Java

Code Generator

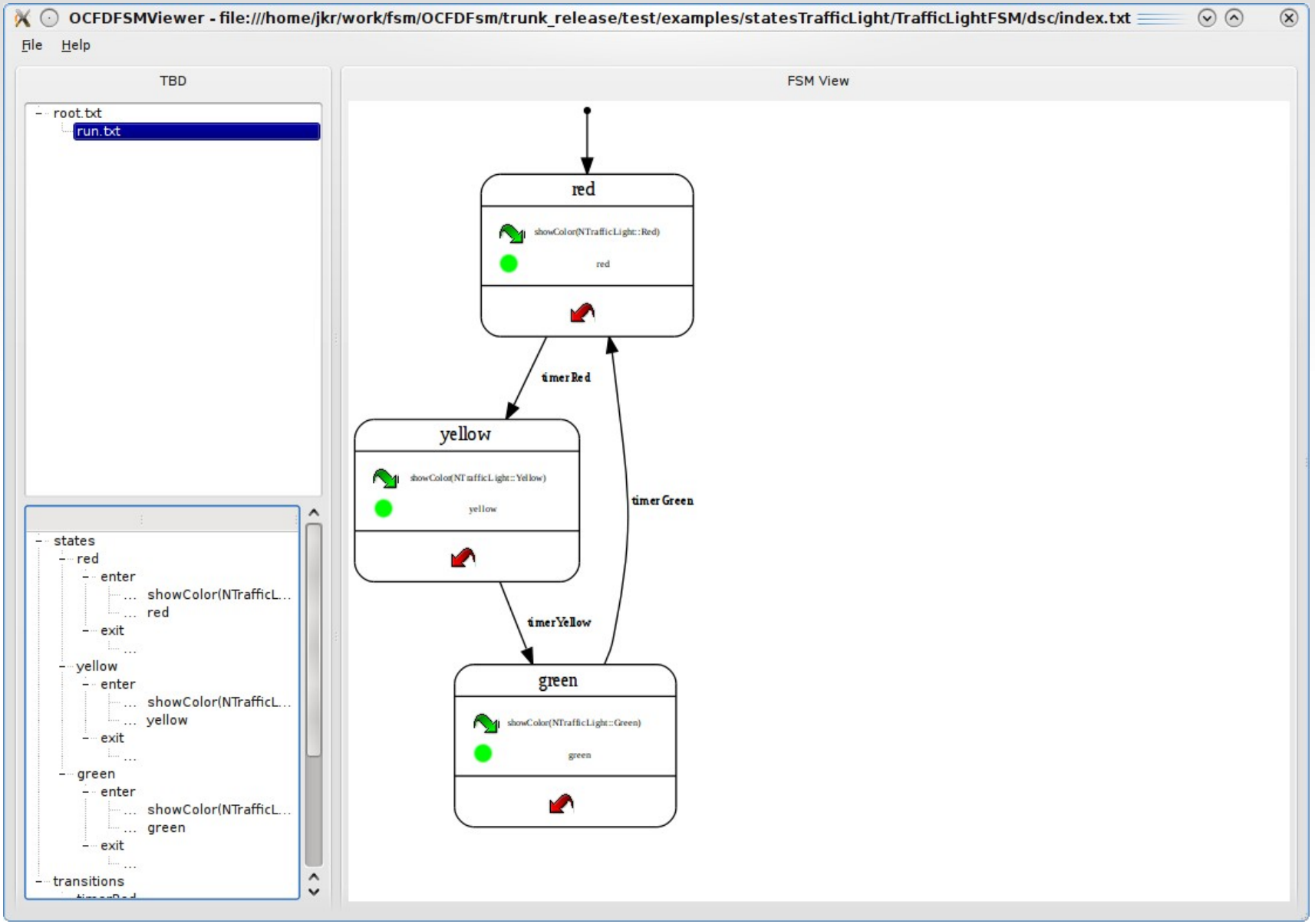
- Based on ”Design Patterns” from
  - Gamma, Erich; Richard Helm, Ralph Johnson, John M. Vlissides (1995).



Visualisation

- Generation of GraphViz dot input files
- Transformation of dot files to SVG with dot
- Generation of text description files
- OCFDFsmViewer as tool to parse description files and link SVG files

OCFDFsmViewer



End