YaFSM Design

by Jörg Kreuzberger

24.03.10

Inhaltsverzeichnis

1 Purpose of this document

The document should give an overview of the design for the generated YaFsm classes

2 Refered Documents

1: http://en.wikipedia.org/wiki/State_pattern, Design Pattern ,

3 Abbrevations

FSM	Finite State Machine

4 Design

The design for the Ya FSM generator follows the ideas taken from [1]

http://en.wikipedia.org/wiki/State_pattern

4.1 Class Diagram

The example state engine „TrafficLight" is base for the class diagram.

ITrafficLightFSMActionHandler
+ ITrafficLightFSMActionHandler()
+ ~ ITrafficLightFSMActionHandler()
+ onRun()
+ onError()
+ showColor(color : const NTrafficLight::Color&)

-moActionHandler 0..1

ITrafficLightFSM
+ ITrafficLightFSM()
+ ~ ITrafficLightFSM()
+ blink(bOn : bool&)
+ run()
+ error()

ITrafficLightFSMState
+ ITrafficLightFSMState()
+ ~ ITrafficLightFSMState()
+ enter(: TrafficLightFSM&)
+ exit(: TrafficLightFSM&)
+ blink(: TrafficLightFSM&, bOn : bool&)
+ run(: TrafficLightFSM&)
+ timergreen(: TrafficLightFSM&)
+ timerblinkYellow(: TrafficLightFSM&)
+ error(: TrafficLightFSM&)
+ timerred(: TrafficLightFSM&)
+ timeryellow(: TrafficLightFSM&)

TrafficLight
+ mTrafficLightFSM : TrafficLightFSM
+ TrafficLight()
+ ~ TrafficLight()
+ onRun()
+ onError()
+ showColor(: const NTrafficLight::Color&)

+mTrafficLightFSM

TrafficLightFSM
+ TrafficLightFSM(oActionHandler : ITrafficLightFSMActionHandler&)
+ ~ TrafficLightFSM()
+ initFSM()
+ setTimerID(iTimerId : int, iTimeOutMs : int)
+ sendEventID(iEventId : int)
+ blink(bOn : bool&)
+ run()
+ error()

0..1
-mpoCurrentState

TrafficLightFSM::TrafficLightFSMStateBase
+ TrafficLightFSMStateBase()
+ ~ TrafficLightFSMStateBase()

-moStaterun

TrafficLightFSM::Staterun
+ Staterun()
+ ~ Staterun()

-moStatered

TrafficLightFSM::Statered
+ Statered()
+ ~ Statered()

-moStategreen

TrafficLightFSM::Stategreen
+ Stategreen()
+ ~ Stategreen()

-moStateyellow

TrafficLightFSM::Stateyellow
+ Stateyellow()
+ ~ Stateyellow()