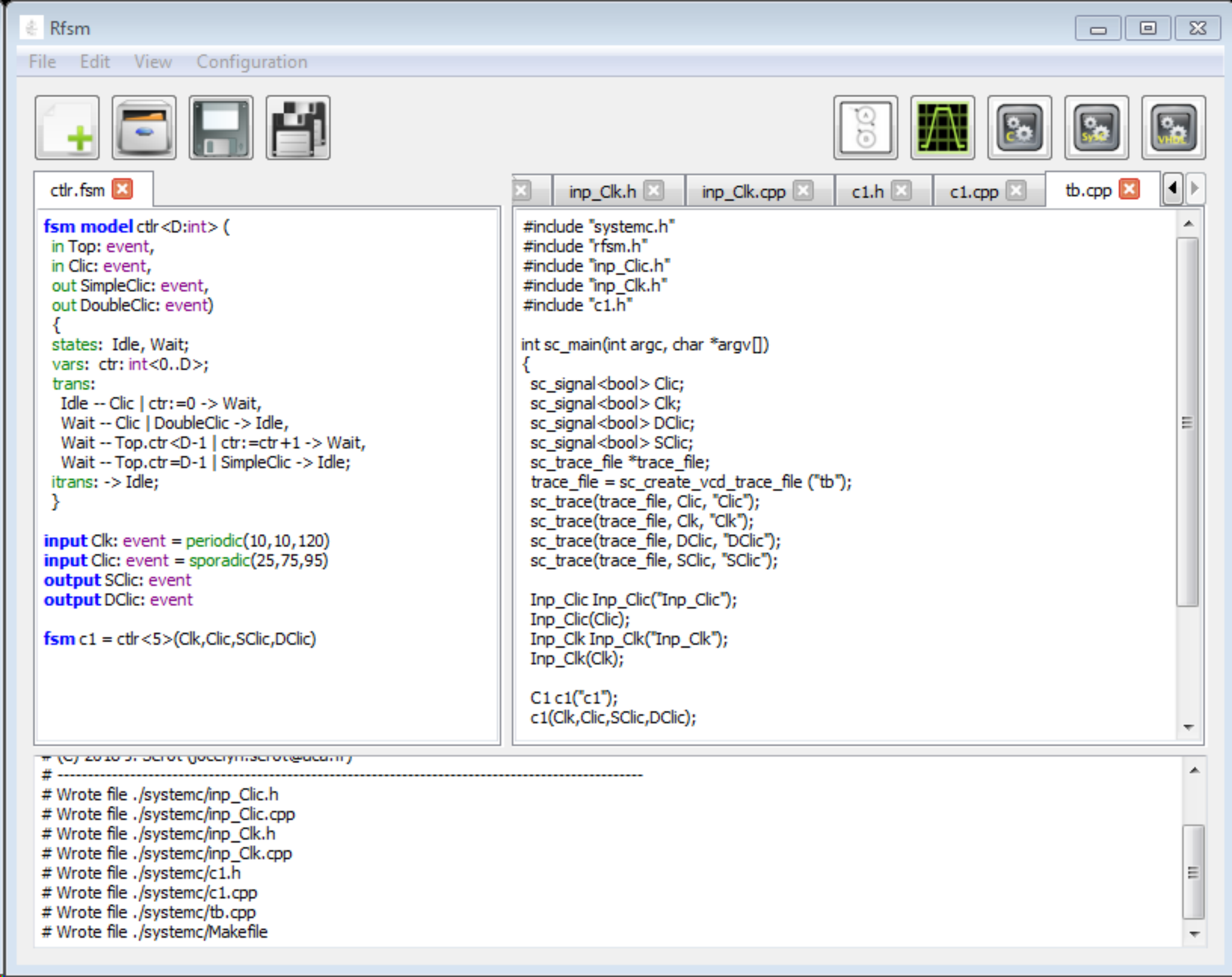

```
fsm model ctlr<D:int> (
 in Top: event,
 in Clic: event,
 out SimpleClic: event,
 out DoubleClic: event)
 {
 states:  Idle, Wait;
 vars:  ctr: int<0..D>;
 trans:
  Idle -- Clic | ctr:=0 -> Wait,
  Wait -- Clic | DoubleClic -> Idle,
  Wait -- Top.ctr<D-1 | ctr:=ctr+1 -> Wait,
  Wait -- Top.ctr=D-1 | SimpleClic -> Idle;
 itrans: -> Idle;
 }

input Clk: event = periodic(10,10,120)
input Clic: event = sporadic(25,75,95)
output SClic: event
output DClic: event

fsm c1 = ctlr<5>(Clk,Clic,SClic,DClic)
```

```
#include "systemc.h"
#include "rfsm.h"
#include "inp_Clic.h"
#include "inp_Clk.h"
#include "c1.h"

int sc_main(int argc, char *argv[])
{
  sc_signal<bool> Clic;
  sc_signal<bool> Clk;
  sc_signal<bool> DClic;
  sc_signal<bool> SClic;
  sc_trace_file *trace_file;
  trace_file = sc_create_vcd_trace_file ("tb");
  sc_trace(trace_file, Clic, "Clic");
  sc_trace(trace_file, Clk, "Clk");
  sc_trace(trace_file, DClic, "DClic");
  sc_trace(trace_file, SClic, "SClic");

  Inp_Clic Inp_Clic("Inp_Clic");
  Inp_Clic(Clic);
  Inp_Clk Inp_Clk("Inp_Clk");
  Inp_Clk(Clk);

  C1 c1("c1");
  c1(Clk,Clic,SClic,DClic);
```

```
# (c) 2018 J. Serot (jocelyn.serot@uca.fr)
# ------------------------------------------------------------------------------
# Wrote file ./systemc/inp_Clic.h
# Wrote file ./systemc/inp_Clic.cpp
# Wrote file ./systemc/inp_Clk.h
# Wrote file ./systemc/inp_Clk.cpp
# Wrote file ./systemc/c1.h
# Wrote file ./systemc/c1.cpp
# Wrote file ./systemc/tb.cpp
# Wrote file ./systemc/Makefile
```