

# KIT Reference Card

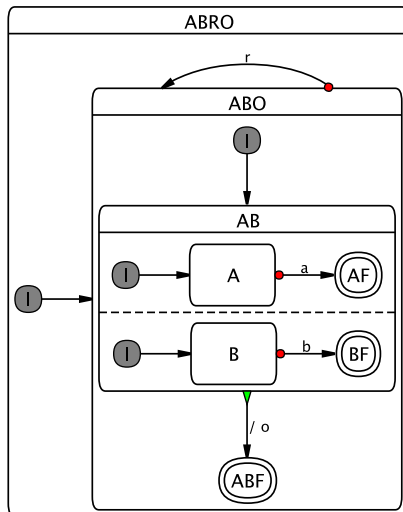
(Textual Statechart Description Language)

## Example ABRO

```

1 statechart ABRO[model="Esterel Studio";version="5.0"]{
2   input a;
3   input b;
4   input r;
5   output o;
6   {
7     ABO{
8       AB{
9         ->A;
10        A->AF[type=sa;label="a"];
11        AF[type=final];
12        ||
13        ->B;
14        B->BF[type=sa;label="b"];
15        BF[type=final];
16      };
17      ->AB;
18      AB->ABF[type=nt;label="/ o"];
19      ABF[type=final];
20    };
21    ->ABO;
22    ABO->ABO[type=sa;label="r"];
23  };
24 };

```



## Statechart

Create a new Statechart



Statechart Header and Body

```

1 statechart ABRO[model="Esterel Studio";version="5.0"]{
  :
  :
6 | {
  :
  :
23 | };
24 | };

```

## Declarations

### Signal

Types: input/output

```

2   input a;
3   input b;
4   input r;
5   output o;

```

## States

### Simple State

```

9   ->A;

```

Remark: The identifier -> creates an initial state, which points to state A (see Section State Types).

### Hierarchical State

```

7   ABO{
  :
16  };

```

### Parallel State

```

8   AB{
  :
12  ||
  :
16  };

```

## State Label

State labels are used to declare state names, which differ from the node name.

```

Example: ->MyState;
         MyState->node;
         node[label="AnOtherStateName"];

```

## State Type

```

11  AF[type=final];

```

Types: history|initial|choice|suspend|final

Abbreviation: The initial doesn't need to be written. An ->A creates an initial state with transition to state A.

## Transition

Two states are connected by a transition denoted by the symbol "->".

Examples: A->B, A->A (Self-Loop)

```

10  A->AF[type=sa;label="a"];

```

## Transition Label

The transition label follows the Statechart transition notation : e Event/Signal, [c] Guard/Condition, /a Action

Example: A->B[label="e[c]/a"];

## Transition Priority

The priority is of the natural numbers (N). A transition labeled with number "1" is of the highest priority relatively to other transitions coming from the same state. A single outgoing transition always has priority "1" and doesn't have to be written.

Example: A->B[priority="1"];

## Transition Type

Types: nt|sa|wa (normal termination, strong abortion, weak abortion)

Example: A->AF[type=sa];