

Project Guidelines

Project Management

The general project **meeting** takes place in the **Railwayroom, Tuesday at 16:00**.

Development Environment

KIELER

Use the [KIELER Nightly Build](#). Keep your version up-to-date.

You can update to a new version from within your running installation via **Help > Check for updates**. Thus it is not necessary to download the KIELER archive every time.

Use UTF-8 as codepage (**especially when using Windows**):

- General > Workspace
 - Text file encoding: UTF-8

It may be helpful to configure the following settings to avoid *Resource is out of sync* warnings in Eclipse:

- General > Workspace
 - Refresh using native hooks or polling: Check
 - Refresh on access
 - Save automatically before build

Code Style

General

Use an indentation of 2 Spaces:

- General > Text Editors
 - Insert Spaces for Tabs: Check
 - Displayed Tab Width: 2

SCT Style

Use the following conventions when modeling an SCChart:

- General order
 - inputs first
 - outputs second
 - internal variables third
 - regions and states afterwards
- Name all regions if you have at least two (no implicit region, unless there is only one)
- Naming
 - For semantically relevant names, use lower case with underscores (e.g. *state some_long_state_name*)
 - For labels and stuff that is intended to increase readability, use more natural english (e.g. *state some_long_state_name "Wait for orders"*)

SCT Code Style

```
scchart Test {

    input bool trigger;
    input int array[10];

    output bool action0, action1;

    int fun;

    region first_region "Have fun":
    // State example
    initial state example_state
    --> example_state immediate "Having fun"
        with trigger
        / action0 = true
        ; action1 = false
        ; fun++

    --> example_state immediate "Having fun"
        with trigger
        / action0 = true
        ; action1 = false
        ; fun--
    ;

    // Region
    region second_region "Do nothing concurrently":

        initial state init;
    }
```

SCTx CodeStyle

```
#import blub

scchart Test {

    input bool trigger
    input int array[10]

    output bool action0, action1

    int fun

    region first_region "Have fun":
    // State example
    initial state example_state
    go to example_state immediate
        if trigger
            && (trigger1
                || trigger2)
            do action0 = true
            ; action1 = false
            ; fun++
            label "Having fun"

    go to example_state immediate
        if trigger
            do action0 = true
            ; action1 = false
            ; fun--
            label "Having fun"

    // Region
    region second_region "Do nothing concurrently":

    initial state init;
}
```

Build Settings

To have the simulation and SCT build correctly via Prom, one has to modify the Prom environment that builds the project:

- Preferences > KIELER SCCharts > Execution Environments
 - Select *Generic*
 - Select tab *Compilation*
 - Select *kieler-gen* as *target directory*
 - Set *Snippets directory* to *snippets*
 - Set *following as compile chain*:
T_REFERENCE, T_CONST, T_MAP, T_FOR, T_HISTORY, T_SUSPEND, T_COUNTDELAY, T_SIGNAL, T_PRE, T_WEAKSUSPEND, T_DEFERRED, T_DURING, T_COMPLEXFINALSTATE, T_ABORT, T_EXIT, T_STATIC, T_INITIALIZATION, T_ENTRY, T_CONNECTOR, T_TRIGGEREFFECT, T_SURFACEDEPTH, T_sccharts.scg, T_scg.dependency, [T_scg.basicblock.sc](#), T_scg.guardExpressions, T_scg.guards, T_scg.scheduling, T_scg.sequentialize, T_scg.s, T_s.c

Git

Use git.

Pull before you start coding.

Add a commit message.

In case of non-trivial conflicts: ask.