

# 2019-10-25 K-Meeting (sdo)

## Meeting Details

- Moderator: als
- Protocol: sdo
- Attendees:
  - als
  - andy
  - nre
  - rvh
  - ssm
  - lgr
  - cds
  - peu
  - mek
  - lan
  - kolja
- Start: 15:00
- End:

## Agenda

- [Bitbucket Problems \(sdo\)](#)
- [Circuit Layout in Dataflow Synthesis \(kolja\)](#)
- [Release of Everything \(nre\)](#)
- [Selfloops \(cds\)](#)
- [KiCo CLI \(als\)](#)
- [Deferred & weak suspend \(kolja\)](#)

## Bitbucket Problems (sdo)

- Too many user
- Alex will find a solution
- Everybody panic!!!

## Circuit Layout in Dataflow Synthesis (kolja)

- Hardware synthesis is now based on the Netlist
- Problems:
  - Registers are there multiple times
  - And gate has output ports to NORTH, it should be EAST
  - If one variable is written to after its read it is visualized as output
  - Registers are initialized to 0, this is currently not visualized
  - Order of expression still has relevance, this should be fixed
  - Binary OR should be the same as logical OR
  - Negation sign in actors and triangle in register should be bigger
- Visualization: Mark wires that are true as red, numbers are shown

## Release of Everything (nre)

- KEITH should be released
- Agenda
  - ELK release (only one open bug)
  - Pragmatic release + LS mergen
  - Semantic release + LS mergen
  - Pragmatic de-eclipsification release later
- OSGi release
  - Suggestion: Release in pragmatic as feature (cds thinks this is good)
  - Suggestion: Put it in open-kieler (cds)
  - Everything else is discussed in a smaller group
- Extend OSGi tool to C++ Module System (as thesis)(cds: nothing to do with our research, rvh maybe)

## Selfloops (cds)

- Use the simple solution as often as possible, try to reduce code complexity
- Use different routing slots for spline self-loops instead of trying to calculate the best solution

- Problems:
  - Spline self-loops:
    - Spline labels will not work with too many self-loops
  - Self-loops between the same ports are drawn in the same routing segment (this is no problem for SCCharts)
- Splines, polyline and orthogonal works
- Self-loop label are now counted to the size of the node
- TODO for release.
  - Fix remaining tickets
  - Ask elk people
  - Ask Alex to test everything
  - Release planned this year

## KiCo CLI (als)

- KiCo is now available as a command-line tool, with kico and all languages from KIELER
- One is able to
  - set the compilation system
  - set an output directory
  - set verbose
  - one is able to save all intermediary results
  - set properties
  - use pattern for input files
- Tasks
  - Order intermediary results by number (such as the pragmatic)
  - After pragmatic de-eclipsification use this to generate pdfs, svgs, pngs
  - only show public systems
  - Suggestion: Flag for output language for listing systems
- One executable for each OS and for Java 8
- Only SCCharts only CLI compiler is also delivered
- mek might be able to use this tool

## Deferred & weak suspend (kolja)

- Deferred was translated via deferred guard
  - Problem: Cannot be scheduled for some cases (if immediate transition back to state that was active before deferred transition was active)
- Solution:
  - Split state that is reached by deferred in deferred state and original state where the deferred state has only delayed outgoing transitions
  - Do this only if it is otherwise not schedulable, since this transformation is expensive
  - Private variables are upped one level to be used in both states
- Weak suspend should work now with the new deferred implementation
- Problem with weak suspend
  - entry and exit action are executed every tick
- Solution
  - Put entry and exit actions in own state before/after the state they refer to
- Shallow deferred does not regard actions
  - It should do this somehow
- Shallow and deep deferred should use actions the same way