HW/SW Entwurfssprachen am Beispiel System-C

Florian Zaruba, Thomas Weber

October 18, 2014

1 HW/SW Design Languages

tba

2 What is SystemC

tba

2.1 History

tba

2.2 Benefits

tba

2.3 Drawbacks

tba

2.4 SysC vs. C

tba

2.5 SysC vs. VHDL

3 Automatic Partitioning

3.1 What is Partitioning?

Partitioning means the separation of hardware and software parts in focus on hardware/software co-design. Traditionally the hardware part of an embedded system is written in VHDL *(more present in Europe)* or Verilog *(more present in the USA)* while the software part is written in *assembly*, *C* or *C++*. The

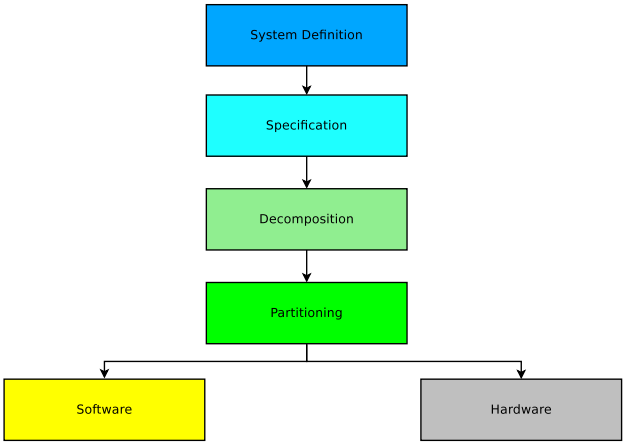

Figure 1: Design flow *(c.f. Hardware Modelling VO)*.

common design-flow (depicted in 1) shows that, after partitioning the design in hardware and software, it is necessary to do all steps before the re-design

3.2

4 Tools

5 Users