

P1450.4 syntax subgroup meeting minutes - 09/26/05

Attendees: Jim O'Reilly, Dave Dowding, Doug Sprague, Tony Taylor, Greg Maston

Not present:

Agenda:

- Discussion about HW setup statements (Timing, DCLevels, DCSets, Category, Selector), and where they belong.
- Would like to discuss the contents of pre and post actions for TestNodes and TestFlows, as well as the contents of exit port statements

Summary (areas of discussion):

- Discussion about HW setup statements (Timing, DCLevels, DCSets, Category, Selector), and where they belong.
 - Do STIL HW setup statements get passed to TestNodes/TestFlows as parameters, or are they specified as statements in the TestNodes/TestFlows (and TestPrograms)?
 - Do we want to specify elements of PatternExec, or just reuse the PatternExec block?
 - How does one pass setup data to TestMethods?
 - Comments from Greg.
 - A word of caution - Verilog's timescale can be set in different modules, which can lead to all sorts of difficulties in getting a common timescale across a uniform set of modules that are all running under one environment. If you allow too much flexibility in where HW setups can be specified, then it can be difficult to determine, when you get to the point of pattern execution, WHERE a particular pin's timing may have been set. When you allow information to be specified at multiple levels, you need to be VERY careful; otherwise it's too easy to get unexpected side effects, which can, among other things, make debug extremely difficult.
 - Also, why is the PatternExec block essentially flattened in these various places (using its contents), instead of just using a PatternExec block directly.
 - Conclusions:
 - Let's leave the HW setup statements where they are now (TestNode, TestFlow, TestProgram) unless it can be determined that it DOESN'T make sense to have them there. However, general consensus is that these statements probably don't have much benefit at the TestProgram level, and will probably be removed.
 - Also, let's reuse the PatternExec for this purpose, instead of listing the elements of the PatternExec block.
 - In addition to the ability to place HW setup statements in the TestNode (and TestFlow) blocks, we also want the ability to pass any type of STIL block to a TestMethod as a parameter. Of course, in order to pass a particular type of STIL block (for instance, a Timing block) as a TestMethod parameter, the TestMethod must be defined to accept that specific STIL block type as a parameter. It's anticipated that the typical use model will be to use STIL setup statements in the TestNode (or TestFlow), while actually passing STIL blocks to TestMethods will be used in specific circumstances where the TestMethod itself must manipulate contents of the block. For example, a clock-stretcher method might generally take two timing blocks (one an at-speed timing block, and one a slower-speed block), and on a vector-by-vector basis, run the patterns first with one timing block, then the other, to determine which vectors are exercising critical paths affected by the faster timing.
- Other comments:
 - Did get some good feedback from the WG regarding the (now) clearer distinction between types and instances.

- Resist the temptation to put incomplete syntax constructs in front of full WG for review, until the syntax subgroup is comfortable with those constructs.
- Other discussion points (no resolution).
 - Some discussion about the inheritance hierarchy (TestFlow is a type of TestNode, derived from a base or generic TestNode). Where Ernie thinks one of the disconnects is, and what we should/can do to resolve that.
 - Resist the temptation to put incomplete syntax constructs in front of full WG for review, until the syntax subgroup is comfortable with those constructs.
 - Need to review conceptual model
 - Is a TestFlow a type of TestMethod?
 - Phase 1 (preprocessor) vs. phase 2 (can run on a tester). Which are we trying to do? Reread PAR to see what guidance it offers.

For reference STIL .4 information can be found at the IEEE STIL website:

<http://grouper.ieee.org/groups/1450/> (select the [P1450.4](#) link from the table) or use the direct link <http://grouper.ieee.org/groups/1450/dot4/index.html>