1450.4 meeting minutes – 03/04/11

Attendees: Ernie Wahl, Paul Reuter, Ajay Khoche
Not present: Oleg Erlich, Markus Seuring, Jim O'Reilly

Agenda:

- IEEE Meeting Preamble (No discussion of proprietary information).
- Discuss and resolve issue regarding Permissions (RO | RW | RRW).
- Discuss and resolve issue regarding const expressions raised by Ernie in recent meetings (several WG members have requested clarification)
- Continue work on section 7.6 "Variables and Expressions".

Summary:

- Will NOT include the shorthand versions of the Permissions attribute for variables/parameters (RW | RRW | RO), but instead will use only the longer versions (ReadWrite | RhsReadWrite | ReadOnly). The rationale is as follows:
    - Permissions are mostly generated and used by tools, although read by tool providers and possibly by users using a text editor on TPG generated STIL.4 code. We could not think of a benefit that would arise from using a mechanism other than keyword Permissions. Using a user-defined keyword for RhsReadWrite would defeat inter-tool communication.
    - Jim also requested that an explanation of the purpose of the RhsReadWrite attribute be included in the ballot document (i.e, as an aid to test program generators, to allow flagging of a variable or parameter that the TPG expects to see by a particular name). Since we on the WG always have trouble remembering what it means without writing it down, it should be written down.
- Recommended more-highly-visible placement of explanation of the tracking behavior of non-constant expressions, e.g., '0.9*prd', where 'prd' is non-constant, may represent different values at different points in the test program depending on the current value of 'prd', regardless of whether this expression is a literal expression, associated with a non-constant variable, e.g., 'Seconds strb = 0.9*prd', passed into a test as a non-constant parameter, or a Spec variable.
- Propose to add the keyword Track (in addition to Const) to the table with regard to section 7.6.2 Literal Expressions, line 1634 of current doc version. Current document semantics (without keyword Track):

```
1 Variables {
2  Seconds prd      = 10ns;    // Stores 10ns
3  Seconds strb     = 0.9*prd; // Stores expression 0.9*prd,    tracks
4  Const Seconds s  = 0.9*prd; // Stores 0.9*10ns or 9ns, doesn't track
5 }
```

Any non-Const variable may have its RHS reassigned during test program execution. Any non-Const variable assigned an expression containing another variable tracks that variable. Same semantics for variable and STIL.0 spec-variable expessions (keyword Const does not apply to STIL.0 spec-variable definitions hence, they all potentially track).

The new proposal semantics (with keyword Track):

```
1 Variables {
2  Seconds prd      = 10ns;    // Stores 10ns
3  Seconds strb     = 0.9*prd; // Stores 0.9*10ns or 9ns,  doesn't track, RHS can be reassigned
4  Track Seconds strb = 0.9*prd; // Stores expression 0.9*prd,     tracks, RHS can't be reassigned
5  Const Seconds s  = 0.9*prd; // Stores 0.9*10ns or 9ns,  doesn't track, RHS can't be reassigned
6 }
```

Any mutable (non-Const, non-Track) variable may have its RHS reassigned during test program execution. Only variables prefaced with keyword Track track RHS expression variables. Unresolved: do we model consistent behavior for variable and spec-variable expressions with the new proposal or do different semantics apply ?

Actions:

- All WG Members: Please respond and state whether you agree or disagree with the two recommendations above
  - To include in the draft ballot document an explanation of the meaning and purpose of the Permissions attribute RhsReadWrite
  - To include an additional keyword Track (along with Const) for variables/parameters (syntax and semantics as described above).
- Email responses (one line for each) to Jim and Ernie (please don't simply "Reply" or "Reply All" to the reflector) by 3/9/2011; Jim and Ernie will summarize responses prior to next week's meeting.

Reference documents (If logged into your google account, can edit. If not, can only view.)

- http://spreadsheets.google.com/ccc?key=0AoKiPr1I9LY9dF95dkhSTVVqOU5GbWJyWFNhY0JPX0E&hl=en
- Namespace resolution examples document: http://docs.google.com/Doc?docid=0AYKiPr1I9LY9ZGY4dmNjNTNfMGZkOGJ2bmZy&hl=en
- Scratchpad spreadsheet: https://spreadsheets0.google.com/ccc?key=tQ93VDnAZ-Cl9RFKpPrPDzw&authkey=COzyro8K&hl=en&authkey=COzyro8K#gid=0
- Scratchpad "Word" doc: https://docs1.google.com/document/d/1zVu2M8nTJsrm0nFbBhiuM8-YRt4ErYqdy_uSa3x3_T4/edit?authkey=CLrgwrsG#

Next meeting: 03/11/11

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