



ORACLE[®]



Technical Committee Status 03/10/11

Neil Korpusik
P1800 Technical Chair

SV-AC

- The following mantis items have been resolved
 - 1756: The LRM doesn't indicate how control tasks \$asserton/off/kill affect verification statements in initial blocks
 - 2386: Rename 16.9 to "Local variables"?
 - 2412: Allow clock inference in sequences
 - 2557: Rules for passing automatic variables to sequence subroutines are not clear
 - 2839: Contradictory statement of increment/decrement operators usage.
 - 3036: Explicitly allow unpacked data types for arguments of assertion system functions
 - 3113: Add port_identifier to constant_primary BNF for sequences, properties and checkers
 - 3135: Verbal explanation of nexttime and always is misleading for multiple clocks.
 - 3376: triggered should be typeset as code
- Currently working on the following enhancements
 - 2476: Need clarification about system functions \$onehot, etc
 - 2804: Need to clarify rule (b) in 16.15.6 to allow inferred clock when expression appears in procedural assertion
 - 3069: Relax rules for \$global_clock resolution
 - 3191: Allow sequence methods with sequence expressions
 - 3295: need a way to control only asserts/covers/assume directives
- Held a F2F meeting – Thursday, Friday of DVCon week (March 3rd, 4th)
 - Worked out a strategy for a set of checker enhancements as well as other major features
 - Prioritized the issue list

SV-BC

- Work in progress
 - Long-term focus
 - Addressing virtual interfaces (mantis 3053)
 - Macro issues (mantis 2310)
 - Requires reference software to facilitate discussions (long lead time)
 - 'generate' for port definitions and connections (mantis 210)
- Elections of chairs was held (Jan 17th conference call)
 - Matt Maidment (Intel) – chair
 - Brad Pierce (Synopsys) – co-chair
- Status is unchanged since the last Working Group meeting
 - The committee has only met once since then

Top-25 SV-BC Issues

Rank	Mantis ID	Summary
1	696	Parameterized tasks, functions
2	2310	Clarified Macro Semantics
3	3053	Virtual interface and interface-port issues
4	3055	Design construction issues
5	2991	Extension of enumerated types
6	1566	Variable number of task and function arguments
7	2114	Problems in definition of modports/abstract modports
8	210	Generate for module port definitions and instance port connections
9	3056	Master list of port issues
10	1084	Logical Expressions in Macros
11	2115	X-Optimism/X-Pessimism resolution
12	3073	Collected \$bits issues

Rank	Mantis ID	Summary
13	1697	Macro Loops
14	1202	define standard preprocessor
15	1251	x/z behavior in various contexts
16	2289	parameters inside comp unit and gen block are local
17	1504	Parameterized Structures (and Unions)
18	1144	Out-of-bounds array address
19	2081	always_comb statements
20	1553	nested module clarifications
21	2684	Variable part-selects
22	1861	Major enhancement of modports
23	1523	behavior of ?: on complex types
24	3074	Connectivity Enhancements
25	2124	`default_nettype var-type directive

SV-CC

- Work in progress

- 3087: OO import/exports for various languages (e, SystemC, C++)

- 732: Representation of super and this in VPI

- 3094: Support for Unified Coverage Interoperability Standard

- 3086: Improve interaction between DPI and VPI

- 3090: Create VPI data model extensions for Checkers

- 1764: vpi_put_value does not specify the scheduling regions

- 3091: Update IP protection model to reflect changes since 200

- 2015: How should cbValueChange callbacks work with nonstatic variables?

- 1352: VPI 27.37 "Multiclock sequence expression" error

- 1593: vpiName property for members of structs and unions

- Mantis 3087

- Cadence is still working on this large proposal

- No update since last Working Group meeting

SV-DC

- Met once since the last Working Group meeting (March 9th)
 - Next meeting will be March 23rd
- Mantis 3398
 - Discussing a joint proposal from Cadence/Mentor
 - User defined nets and resolution functions
- New IEEE participation rules
 - Expecting to lose 30% of voting members
- Need to hold a new election of co-chair?
 - Jim Lear (Cirrus Logic) - co-chair

SV-DC (cont)

- Requirements list for this PAR
 - Scalar real-valued nets
 - Real-valued nets with multiple drivers
 - Resolution functions for multiply driven real valued nets
 - Ability to represent X (unknown) and Z (undriven) states for real nets
 - Unidirectional and bidirectional ports with real nets
 - Aggregate nets with real-valued components
 - Constructs such as vectors, static arrays, structs and unions
 - Resolution functions for multiply driven aggregate nets
 - Unidirectional and bidirectional ports with aggregate nets
 - Atomic aggregate nets whose components resolved jointly (correlated resolution)
 - Ability to represent x, z states for atomic aggregate nets
 - Utilities for real-valued modeling
 - Definitions of math functions and relational operators for real types in the presence x and z states

STATUS

- Met once since last Working Group meeting
 - February 14 2010 was the most recent meeting.
 - No meeting the week of DVCon
- From the top 25
 - Mantis 696 (from sv-bc) was approved
 - Being worked on
 - 1356 (multiple inheritance)
 - 2506 (coverage)
- Other mantis items being worked on (related to 1356)
 - 3278 (virtual method type rules)
 - 3279 (enhance method override rules to allow covariant typing)
 - 3293 (clarify \$cast behavior on class handles)

Risks / Opens / Issues

- The new voting policy may hamper effective participation from previous usual attendees.
- A few complex items on the review list may consume all available time.

March/April 2011 PLANS

- Continue work on the top 25 list.
- Finalize 1356 and 2506.
- Next regular meeting will be March 28th

SV-EC Top-25 Mantis Items

top 25 Rank	Mantis ID	Number of Votes	weighted vote	Summary	Degrees of difficulty
1	2848	7	159	Is it legal to assign an interface containing class declaration to a virtual interface	med
2	3002	8	125	Aspect Oriented Programming (AOP) features	High
3	3046	8	112	Dotted names within inlined constraints	Low
4	1356	6	112	Multiple Inheritance	High
5	3001	9	102	Proper Polymorphic behavior of instantiation	low
6	2999	7	99	Class Handle reference inside of Constraints	med
7	3003	6	98	Constraint Composition	High
8	3082	7	96	(4) Ambiguity resolution (see slide 10 for examples of parts of the Standard that have been interpreted differently by different simulators)	
9	2845	4	84	virtual interface type checking versus interface type that had been defparam'ed	high
10	2956	4	76	clarify class 'process' definition (9.7 vs 18.13.3, 18.13.4, 18.13.5)	low
11	2505	4	76	class select: what is allowed after the dot?	low
12	2735	4	73	Ballot Comment #48: Chaining of method calls	med
13	1706	4	72	Meaning of static prefix for virtual interface assignments	
14	2488	4	69	Are virtual method calls legal within class constructors?	med
15	2112	6	69	Remove restrictions on NBA assignments to class members	med
16	3028	6	68	constraints for unique array elements.	Med
17	2950	4	67	virtual method prototype matching	low
18	2794	4	64	Clarify queue methods return status	low
19	2993	4	63	Cross cover points across different cover groups	med
20	1442	3	63	Clocking blocks legal in modports, missing from text description in 20.9	
21	2506 [2953]	6	61	Algorithmic generation of covergroup bin contents [2506 to replace 2953]	high
22	1349	5	61	fork/join none: what if parent thread terminates without blocking statement?	
23	2949	4	60	LRM is silent about the semantics of referencing a clocking block output	low
24	2451	6	58	Omitting body defaults	med
25	2987	6	56	Soft Constraints	med
	3278	Related to 1356		virtual method type rules	
	3279	Related to 1356		Enhance method override rules to allow covariant typing	
	3293	Related to 1356		Clarify \$cast behaviour on class handles	



SV-FC

- No activity since the last Working Group meeting

Champions

- No activity since the last Working Group meeting
- 16 mantis items are currently in the resolved state
 - These will become part of the next email vote