



ORACLE[®]



Technical Committee Status 10/26/11

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P1800 Technical Chair

SV-AC

- The following mantis items have been resolved (5)
 - 2093 Checker construct should permit output arguments
 - 3034 Allow continuous and blocking assignments in checkers
 - 3033 Enhance checker modeling capabilities
 - 3213 Update definition of sampled value
 - 2743 Allow subroutine_call_statement in a checker
- Champion's feedback needs to be addressed on the following
 - 2476 Need clarification about system functions \$onehot, etc
 - 3145 Need to clearly define "maximal property"
 - 3564 9.2.2.2.1; clarify whether variables read in an assertion contribute to the sensitivity of an always_comb
- 8 proposals are currently up for a Champion's email vote
 - This is at least the second round for most of these
 - Some Champions required more time (for 5 proposals)
 - Two were updated to address Champion's feedback
- Meetings now held on an as-needed basis
 - Addressing Champion's feedback

Results: Top SV-AC Issues

Rank	Name		
	Id	Summary	Rank
1	AMS assertions		
	2328	Review and relax restrictions on data types in assertions	1
	3058	Add support for real variables and continuous time, which are necessary for mixed-signal assertions	2
2	Checker usability		
	2093	Checker construct (Mantis 1900) should permit output arguments	3
	3034	Allow continuous and blocking assignments in checkers	5
	3033	Allow procedural control statements in checkers	9
	2743	Allow subroutine_call_statement in a checker	13
	3032	Allow forcing in checkers	19
	2751	P1800-2009: checker formal arguments may not be connected to interfaces // WHY?	20
	2111	Allow parameters in checkers	26
3	Assertion system functions		
	3037	Introduce assertion system functions for 4-valued type support	4
	3027	\$asserton doesn't report existing failures in immediate assertions: should the language require it to?	8
	2205	\$asseroff, \$assertkill and \$asserton description is ambiguous	14
	3036	Explicitly allow unpacked data types for arguments of assertion system functions	15
	1675	Assertion system function syntax is not complete	29
	1763	The LRM does not define whether assertion control tasks affect sequence methods and events	32
	3295	need a way to control only asserts/covers/assume directives	

Results: Top SV-AC Issues (cont.)

Rank	Name		Rank
	Id	Summary	
4	Inference		
	2412	Allow clock inference in sequences	6
5	Sampling		
	3035	More flexible definition of checker argument sampling	7
6	Local variables		
	3057	Make local variables a first class language construct in SVA	10
	2555	Clarify relationships of different local variable binding mechanisms	30
	3195	Local Variables Flow Out Issue in and/or/intersect/implies	
7	Scoping		
	3069	Relax rules for \$global_clock resolution	11
	3030	Allow checker instantiation in functions and tasks	12
	2151	Referencing assertions in functions	21
	2944	concurrent assertions in tasks/functions	23
	3031	Allow checker instantiation in classes	24
8	Type system		
	3029	Remove limitation regarding passing dynamic arrays to sequences, properties and checkers	16
	3024	Introduce generic integral type	17
	966	\$isunbounded()	24
	1647	Type query functions	31

Results: Top SV-AC Issues (cont.)

Rank	Name		Rank
	Id	Summary	
9	Covergroups		
	3038	Tighter integration between SVA constructs and covergroups	15
10	Formal Semantics		
	1296	Annex E does not cover all clocked derived forms	7
11	Vacuity		
	2546	'empty match' and 'vacuous success' are not clearly defined in LRM	27
12	Temporal logic		
	2172	Add sequence if...else	28
	2297	Case construct for sequences	33
13	Deferred assertions		
	3206	Deferred assertions are sensitive to glitches	
14	Sequences and properties		
	3191	Allow sequence methods with sequence expressions	

P1800

SV-BC SystemVerilog Basic Committee Updates October 26, 2011

STATUS

- Last Meeting September 26, 2011
- 6th of top 24 issues resolved (1523)
- 7th of top 24 issues resolved (2081)
- Also addressed 1067 & 3608

- Issues in Resolved state
 - 3326, 3233, 2889, 2289, 2081, 1523, 1504, 1251, 1067, 696

- None of the proposals have Champion's feedback.

Risks / Opens / Issues

- **Issue** – Missed updating status of 3608 to resolved. Fixed. Issue ready for Champions review.

Near-Term Plans

- Waiting for next stage of process

Top-25 SV-BC Issues

Rank	Mantis ID	Summary	Rank	Mantis ID	Summary
1	696	Parameterized tasks, functions	13	1697	Macro Loops
2	2310	Clarified Macro Semantics	14	1202	define standard preprocessor
3	3053	Virtual interface and interface-port issues	15	1251	x/z behavior in various contexts
4	3055	Design construction issues	16	2289	parameters inside comp unit and gen block are local
5	2991	Extension of enumerated types	17	1504	Parameterized Structures (and Unions)
6	1566	Variable number of task and function arguments	18	1144	Out-of-bounds array address
7	2114	Problems in definition of modports/abstract modports	19	2081	always_comb statements
8	210	Generate for module port definitions and instance port connections	20	1553	nested module clarifications
9	3056	Master list of port issues	21	2684	Variable part-selects
10	1084	Logical Expressions in Macros	22	1861	Major enhancement of modports
11	2115	X-Optimism/X-Pessimism resolution	23	1523	Behavior of ?: on complex types
12	3073	Collected \$bits issues	24	3074	Connectivity Enhancements
			25	2124	`default_nettype var-type directive

SV-CC

- Still working on DPI-OO proposal (mantis 3087)
 - This is a very large proposal (over 75 pages)
 - If it gets approved it will take time for the Champions to review
- Francoise flagged some proposals that require sv-cc updates
 - 3001, 2987 , 3724, 1356
- 6 mantis items are currently up for a Champion's email vote

- The above status is from my observations – no official status received.

SV-DC

- No additional meetings scheduled
- All mantis items being addressed are now completed

3398 User defined nets and resolution functions

3724 Allow generic interconnect for "typeless" connections

Status

An email vote is currently in progress (ending on Nov 1st)

- 2987 – Soft Constraints
 - Trying to reduce the abstains; also one small change
- 2506 – coverage space shapes (bins)
 - The latest set of changes had not been approved
 - Several changes made based on inputs from Shalom.

Addressing Champion's feedback

- 3001 Proper Polymorphic behavior of instantiation
 - The changes have been made (ready for WG)
- 1356 Multiple inheritance
 - Changes from friendly amendments being applied
- 3278 virtual method type rules
 - Changes from friendly amendments being applied
- 3046 Dotted names within inlined constraints
 - One champion opposed (sv-ec wants to send to WG)
- 3293 Clarify \$cast behaviour on class handles
 - The objections were addressed. (ready for WG)
- 2905 BNF bug for attribute instance along with
 - Francoise withdrew her objection (ready for WG)
- 2505 class select: what is allowed after the dot?
 - Is being updated to address the feedback

Risks / Opens / Issues

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- Was not able to finish all 25 items by deadline.

October/November 2011 PLANS

- Finish addressing Champion's feedback
- Email vote currently in progress
- 3 proposals still being updated.
- 2 proposals in current Champion's vote
- Verify all changes to the LRM.

SV-EC top-25 mantis item list

top 25 Rank	Mantis ID	#Votes	weighted vote	Summary	Degree 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	
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

- 3 email votes since the last Working Group meeting
 - Sept 20th – 16 (27 were ready) – 9 approved, 1 opposed, 6 need more time
 - Oct 2nd – 9 (all that were ready) – 6 approved, 2 opposed, 1 need more time
 - Oct 17th – 10 (15 were ready) – 4 approved, 5 opposed, 1 need more time
 - Oct 31st – 17 (all that were ready) – expecting some to be opposed (given recent history)
 - – 1 (just came in from sv-bc)
- The champions are having trouble keeping up
 - Holidays
 - Travel
 - Many large proposals
 - Insistence on detailed reviews
- There are 17 mantis items currently up for an email vote
 - Ends on Oct 31st
 - sv-ac (8), sv-bc (1), sv-cc (6), sv-dc (0), sv-ec (2)
- May need to revert to meetings to avoid lone opposed votes

Summary

- 44 (+2 from sv-ec) mantis items in resolved state
 - 26 are ready for a vote in the Working Group (today)
 - 17 are currently in a Champion's email vote
 - 1 from the sv-bc – just recently moved to resolved state
- 8+ mantis items in the feedback state
 - 3 sv-ac
 - 0 sv-bc
 - ? sv-cc
 - 0 sv-dc
 - 5 sv-ec