

SV-AC Scope for 1800-2112

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Overview

- ▶ Process
- ▶ Results



Process

- ▶ SV-AC made prioritization according to issues, and not according to Mantis items since specific Mantis items have too low level of detail, and the issue partitioning between different Mantis items is often artificial
 - ▶ It was decided not to create new Mantis items per issue
- ▶ SV-AC recommends to limit the list by 12 issues only to keep the effort manageable
 - ▶ Chosen 12 issues comprise 33 Mantis items
- ▶ Prioritized issue list was unanimously approved by voice vote on May 11, 2010
- ▶ Issues are sorted by score
 - ▶ List of Mantis items with indication of their individual score appears for each issue



Results: Top SV-AC Issues

Rank	Name		Rank
	Id	Summary	
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



Results: Top SV-AC Issues (cont.)

Rank	Name		
	Id	Summary	Rank
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
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		
	Id	Summary	Rank
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



Addressing P1800 Top issues

Item	User	Producer	Combined	User Ordinal	Producer Ordinal	Combined Ordinal
Cleanup and Ambiguity Resolution -Rationalize the type system	31	56	87	1	1	1
AOP	25	5	30	2	8	2
Design Connectivity features (Cliff's X's)	16	1	17	3	17	5
Assertions & Checkers - The letter "t" - Real value assertions	15	6	21	4	7	4
Ease of use - Macros - Executable includes - Generates	13	2	15	5	14	8
Covergroups	10	3	13	6	11	10
Multiple Inheritance	8	3	11	7	12	11
Parameterized functions; variable number of arguments	6	4	10	8	9	12
Deprecating Features	6	4	10	9	10	13
Constraint Improvements	5	0	5	10		16
Connections to Analog -Verilog AMS -RF	4	17	21	11	2	3
Interfaces	3	12	15	12	4	7
General Directions & Vision	2	14	16	13	3	6
IEEE 1735/Encryption	2	3	5	14	13	
VPI/DPI Interactions	2	2	4	15	15	17
BlueSpec SV Enhancements	2	11	13	16	5	9
VCD	1	2	3	17	16	18
Class-based interface	1	7	8	18	6	14
Links to SystemC 1p (1p)	0	1	1	19	17	19
"DOT" Standards	0	0	0	20	20	20
Top-Down goals to drive lower groups (Vision)	0	0	0	21	21	21

3: 2205, 3036, 1675, 1763
8: 3029, 3024, 966, 1647

1: 2328
2: 2093, 3034, 3033, 2743, 3032, 2751, 2111
5: 3035
6: 3057, 2555
7: 3030, 2151, 2944, 3031
10: 1296
11: 2546
12: 2172, 2297

1: 3058

2: 2751