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## **Technical Committee Status** 11/11/10

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P1800 Technical Chair

# SV-AC

- **The following mantis items have been resolved** (no changes for some)
  - 1627: clarify that expect statement not allowed in functions
  - 2206: Random simulation of non-deterministic free variables in checkers
  - 1763: The LRM does not define whether assertion control tasks affect sequence methods and events
  - 2205: \$asseroff, \$assertkill and \$asserton description is ambiguous
  - 2353: 'classes' missing from description
  - 2412: Allow clock inference in sequences
  - 2476: Need clarification about system functions \$onehot, etc
  - 2485: terminology related to immediate and deferred assertions
  - 2747: Typing error, missing () around property declaration
  - 2904: Clarify when disable iff condition must occur relative to starting and ending of an attempt
  - 2938: Surprising (to some users) interaction between deferred assertions & short-circuiting
  - 3135: Verbal explanation of nexttime and always is misleading for multiple clocks.
- **Currently working on the following major errata/enhancements:**
  - 2578: Vacuity definition
  - 3034: Allow continuous and blocking assignments in checkers
  - 3206: Deferred assertions are sensitive to glitches
  - 3213: Update definition of sampled value

# SV-BC November Update

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## ▶ 9 Issues Resolved

### ▶ #1 of Top 25

#### ▶ 696 - Parameterized Functions

### ▶ 8 minor issues

- ▶ 1133(no change), 1170(port decl), 2107 (no change) 3080(duplicate), 3137(no change), 3210(no change), 3225(clarification), 3231(clarification)

## ▶ Topics getting attention

- ▶ Interfaces: Still under discussion thanks to Peter Flake ☐
- ▶ Macros: Building consensus on how to approach the problem. The standard lacks considerable information.
- ▶ Design Construction & Port related issues: Shalom chipping away at the numerous issues.

# 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

- Has been meeting regularly (every 2 weeks)
- There are now 9 mantis items ready for the Champions

# SV-DC Summary

- Status
  - Met Oct. 22nd (Next meeting: Nov. 17th)
  - Discussing current language capabilities and concrete examples

## STATUS

- Held regular bi-weekly meetings.
- Participations have been consistent.
- From the 25 items:
  - Mantis 2506 is now being reviewed in place of 2953 [approved to work on in p1800 10/14/2010 meeting].
  - Mantis 251, [approved to close in email vote] will remain open pending the resolution of 2506 based on champion's feedback.
  - Working through the rest of 25 mantis items: at the moment 1356 [Multiple inheritance] is being discussed.
  - During 1356 discussion/review it has become apparent that **we need permission to address/work on** other mantis items addressing this issue, :
    - 3278 [virtual method type rules]
    - 3279 [Enhance method override rules to allow covariant typing]
    - ??? [ \$cast to null destination clarification]

## 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.
- New mantis items that need to be addressed: as a matter of policy.

## November-December 2010 PLANS

- Continue with high-level review.
- Review champions' comments on closed and approved mantis items.
- Review more proposals for approval.
- Next meeting Nov 22 & Dec 6th.
- We may schedule meetings on Jan 10, and January 17 2011, then biweekly.

# SV-EC top 25 list: Vote result (1)

| 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                   |

# SV-FC

- Not active
- Not expected to be needed for this PAR

# Champions

- Conducted an email vote on the next 32 resolved mantis items
  - Feedback was sent back to the TC's for 19 items
- There are about 30 more in the resolved state
  - All 30 will be put up for an email vote