

**IEEE P1800 SystemVerilog Working Group  
APPROVED MINUTES  
21 November 2004  
9:00 a.m. – 5:00 p.m. IST  
Intel  
Haifa, Israel**

**1 CALL TO ORDER**

Chair Srouji called the meeting to order 9:09 am.

Introductions offered and attendance was taken of the participants. DR/DRA status, affiliations, guest and staff status was determined and recorded.

Key: DR= Designated Representative  
DRA= Designated Representative Alternate  
O=Observer  
S=Staff

Present	Entity Name	Representative Name	Representative Designation	IEEE-SA Member	Voting Member
X	Intel	Johny Srouji	DR	Yes	Yes
X	Accellera	Vassilios Gerousis	DR	Yes	Yes
	Bluespec	Rishiyur Nikhil	DR	Yes	Yes
X	Cadence Design Systems	Victor Berman	DR	Yes	Yes
X		Charles Dawson	DRA		
		Stephen Sharp	DRA		
		Jay Lawrence	DRA		
		Stephen Dovich	DRA		
	Kathy McKinley	DRA			
X	Fintronic USA	Alec Stanculescu	DR	Yes	Yes
	Jeda Technologies	Eugene Zhang	DR	Yes	Yes
X	IBM	Yossi Lichtenstein	DRA	Yes	Yes
X	Infineon	Wolfgang Ecker	DR	Yes	Yes
X	Mentor Graphics	Dennis Brophy	DR	Yes	Yes
		Dave Rich	DRA		
X	Sun Microsystems	Neil Korpusik	DRA	Yes	Yes
	Sunburst Design	Cliff Cummings	DR	Yes	Yes
X	Sutherland HDL	Stu Sutherland	DR	Yes	Yes
X	Synopsys	Oz Levia	DR	Yes	Yes
X		Karen Pieper	DRA		
		Mehidi Mohtasehemi			
	Verisity	Michael McNamara	DR	Yes	Yes
		Lori Kate Smith	DRA		
	<b>Observers</b>				
X	Freescale	Shalom Bresticker	O	No	No
	<b>Staff</b>				
X	IEEE-SA	Noelle Humenick	S	No	No

The full IEEE P1800 SystemVerilog Working Group Roster with attendance history including this meeting can be found on eda.org.

[Download Roster](#)

**2 APPROVAL OF AGENDA**

A motion (Victor Berman, Oz Levia) was made to approve the agenda. The motion was unanimously approved.

### **3 CALL FOR PATENTS**

IEEE Patent slides were read and presented to the team by Secretary Brophy. The patent slides can be found at the IEEE-SA PatCom website.

[Download Patent Slide set \(PowerPoint\)](#)

### **4 APPROVAL OF 11 OCTOBER 2004 MEETING MINUTES**

Modifications proposed to the 11 October 2004 were made to the meeting minutes that had been emailed prior to the meeting.

A motion (Victor Berman, Oz Levia) was made to approve the 11 October 2004 meeting minutes as amended. The motion was unanimously approved.

### **5 ACTION ITEM REVIEW AND FOLLOW-UP**

Chair Srouji reviewed the action items that had been collected prior to the start of the meeting that were not closed. The status of the open items was updated in the action list spreadsheet and any documentation on the discussion during this process can be found in the updated action item list. (See download hyperlink below.)

Karen Pieper informed the SV-WG that nominations for an end-user champion for the SV-CC is closed and there is no end-user champion.

A question of how complete the 1364 LRM was posed. It was indicated that all 1364 approved issues with the exception of 3 issues are in the specification today. Stu and Shalom will work on the 1364 document to do what is necessary to complete it. Shalom will give Stu any help he needs.

[Download Action Item List](#)

### **6 STATUS UPDATE ON 1364 VERILOG TECHNICAL SUB-GROUP CHAIR ELECTION**

The election for the 1364 technical sub-group chair ended 20 November 2004. There were 8 votes for Tom Fitzpatrick and 7 votes for Neil Korpusik.

A motion (Victor Berman, Oz Levia) was made to ratify the 1364 technical sub-group chair election. The motion was unanimously approved.

A motion (Oz Levia, Dennis Brophy) was made to appoint Neil Korpusik of Sun to be the co-chair of the 1364 technical sub-group. The motion was unanimously approved.

### **7 STATUS UPDATE AND REVIEW OF IEEE SYSTEMVERILOG LRM DRAFT 2.0**

Stu presented a status update on the LRM. Stu created Draft 2 and it has been posted at eda.org. Stu will add to the introduction section more info on the SystemVerilog history.

There was a discussion on the VPI diagrams. The diagrams were going to be redone using the UML standard. There has been some work to determine feasibility of this, but not enough work has been done to take the current specification to UML. It was noted that even if this work is completed, it might take too much time to verify that the transformation to the UML diagrams is error free.

Download Stu's Presentation [**JOHNY NEEDS TO FORWARD TO DENNIS**]

## **8 STATUS UPDATE ON MEMBERS FEES COLLECTION**

Invoices were sent to the corporate members. Payment is due on or before 1 December 2004. Those payments on track are Intel, Cadence, Mentor, Sun & Synopsys. The SV WG needs to contact Infineon and Verisity since we have not heard from them on this.

**Action Request:** [Dennis Brophy] Contact Infineon and Verisity DR and report back on assessment payment status.

## **9 STATUS UPDATE FROM SYSTEMVERILOG TECHNICAL COMMITTEES AND CHAMPIONS SUBGROUP**

Karen asked each of the committee chairs to submit an update. Karen used this information to create the presentation on the issues.

### SV-BC

For SV-BC there are 38 open issues. 17 do not have proposals. The group discussed how the open issues without proposals could be addressed. Karen was asked to work with Matt on this.

**Action Request:** [Karen Pieper] Contact Matt Maidment and work with him to address the 17 unaddressed issues to schedule and prioritize.

SV-BC has assumed that the data type is one of the high priority issues to deal with. On 21 November 2004, there is a meeting of the data types team. During the last several meetings, new issues have been raised and more time to review has been needed. It is difficult to predict what the outcome of the 21 November meeting will be. There are other meetings scheduled, one on 23 November 2004 and one on 30 November 2004. There are still some issues, some may be resolved but there is not a big risk if they do not all get addressed to keep to schedule.

The unaddressed and more interesting issues are colored blue in Karen's presentation.

### SV-EC

31 issues have been resolved to date. In the next week, less major issues will probably be addressed. There are still some major items that will likely not be completed by the last November meeting. There are about 30-40 of not to be addressed. There is also a list of issues that will be treated as enhancements.

### SV-CC

There are 50 unresolved issues. All but 3 are in the Assigned State. 20 Issues have been resolved, but issues 50 and 205 are more controversial and have been brought to the SV WG for resolution.

## PTF

The desire is to deprecate PLI 1.0 sections. Vote expected 1 December 2004. Support for the *generate* proposal is due by 24 November 2004 and vote on 1 December 2004. Not much work has been done with UML.

Other groups are driving requirements and the SV-CC needs to comprehend them in their clauses. Therefore the SV-CC needs to lag those groups since they must respond to and address those issues. The SV-CC expects they will need more time after 1 December 2003 to complete this.

At the moment, new issues are coming in as fast as they are being resolved. There are still a lot of errata issues. When a diagram is examined, there are issues discovered. There is no support in VPI for put/get value so new data types. New data types refer to ALL SystemVerilog data types and possibly the types on net proposals SV-BC are working on. This is a big hole for SV-CC.

Summary - a lot of work to do but most of the work is done.

## SV-AC

Email vote under way now. Everything is largely controlled and the last meeting prior on 1 December 2004 will help drive further closure.

## Champions Concerns

1. VPI access is not defined. Stu believes this would likely require 3 SV-CC meetings.
2. Vote on data types is likely to happen on 1 December 2004 and thus there is no time for SV-CC action.
3. Champions recommend that the proposal include the VPI routines rather than having that come in a separate phase. Given schedule constraints, this will probably not happen.
4. Bit Stream types. This is a new issue Dave Rich will file shortly. It will cross the SV-BC and the SV-EC. The SV-EC will own it.
5. SV-CC and SV-BC coordination is required to answer some questions. Do prototypes require the names of formals? Do the DPI prototypes have the same form as the other data types? Do we need separate BNF for these or footnotes?
6. Are integer types a form of packed array? Bassam will take on coordination role inviting several SV-BC and SV-CC members to participate.
7. Bind construct: It was part of SV-AC, but moved to SV-BC as a general construct. There is one backward compatibility issue with the proposal. There is another proposal, which does not have a backward compatibility issue. The champions think this is a schedule issue but Dave Rich thinks it is a showstopper. The bind construct is almost not defined and really defined by example. The syntax is clear the semantics is not. Mark Hartoog and Doug Warmke are working to create a proposal and the SV-BC is working on review the current proposal.

Data type has first priority followed by bind.

There was a question brought to the Errata Technical Sub-Committee chair as to if there could be a proxy for a champion. The consensus is a champion cannot appoint a proxy for himself or herself for a meeting. The alternative is to offer written feedback prior to a meeting that one cannot attend.

## V-ETF

No issues, no showstoppers.

Download Karen's Presentation

**Action Request [SV WG]** Determine when to freeze all work and allow the SV-CC time to address all final issues from other committees.

## **10 TECHNICAL UPDATE ON DATA TYPES EFFORT UNDER SV-BC**

Kathy was not at the meeting to present on the status of this activity. No further report or discussion.

## **12 PRESENT RECENTLY PASSED ISSUES BY SYSTEMVERILOG TECHNICAL COMMITTEE**

Return V-530 and V-605 to Chas' committee. The exact status is in question, so they will be sent back to the committee for clarification by the Errata Technical Sub-Committee chair.

Resolution of SV-CC issue 50 brought to SV-WG for discussion by champion group procedures. Discussion on the issue is suspended for more analysis and resolution at the 15 December 2004.

**Action Request [Oz Levia]:** On 3 December 2005, Oz is to send out an impact analysis and come up with possible non-obtrusive suggestions to resolve issue 50.

For Issues 76, 109 and 119, Françoise provided friendly amendments. A little wordsmithing to select a better verb tense is preferred to having the issues sent back to the SV-BC.

A motion was made (Karen Pieper, Dennis Brophy) to ratify the champion recommendation to accept 76, 109 and 119 into the standard and create a new issue to handle the proposed amendment by Françoise. The motion carried unanimously

For V-604 approval was not unanimous. Cliff wanted no consideration of defparams and the abstention was that the best course of action was to deprecate defparam rather than addressing any issues with it. Any discussion or motions related to defparams promotes the use of defparams.

A motion was made (Karen Pieper, Dennis Brophy) to ratify the champion recommendations and accept issues from line item 8 to line item 96 in the spreadsheet. The motion was unanimous.

**Action Request [Karen Pieper]:** determine if there is an issue of use of parameters in generates with their use in SystemVerilog.

Download Karen's Spreadsheet

## **13 REVIEW & TRACK OUR SCHEDULE OF OUR MAJOR MILESTONES**

The schedule was reviewed for sanity and any issues. It was agreed modify the scheduled deliverables. More time is being given for review of completed specs and alignment to meeting dates. The spreadsheet with the changes can be downloaded for the new schedule.

[Download Schedule Spreadsheet.](#)

### SV-CC & VPI UML-Drawing Schedule Issue

The UML drawings are going to be delivered on 13 January 2004. Considering the volume of them and schedule, it was discussed that it would be better if stick with the old-style. It was noted that it will require a lot of work and it will introduce to much uncertainty.

Action Request [Stu Sutherland]: What is the amount of effort to include the UML-based descriptions into the specification. Contact Françoise and Charles to see what the amount of work would be.

### SV-CC Lag Review Time Schedule Issue

The data types proposal should come with VPI in it; therefore does the SV-CC need extra time? If one can't separate it, then data types would probably not make it into this release. Give SV-CC committee on the data types issue two weeks extra time until 15 December 2004. The champion review would then be done by 22 December 2004. SV-WG would have a telecon on 5 January 2005 at 8am PST to review the champion recommendations.

A motion was made (Oz Levia, Victor Berman) was made to approve the SV-CC changes. The motion approved unanimously.

**Action Request [Johny Srouji]:** Send meeting notice for the 5 January 2005 telecon.

### Verilog 2-3 Week Lag and Insert 1364 Milestones into Schedule

**Action Request [Tom Fitzpatrick, Neil Korpusik]:** Have the 1364 chair and co-chair report back to the SV-WG by 3 December 2004 on a schedule for the 1364 drafts in conjunction with the 1800 schedule and under the constraints that no changes to the ballot schedule are allowed and no additional funds are available. They should consult with Stu and Shalom.

### Press Releases

The number we have for the program is two. One is scheduled on 18 February 2005 when we go to ballot and the second one when the IEEE-SA Board approves the LRM on 23 September 2005. (Dates are those from the schedule.)

## **14 STATUS UPDATE ON TECHNICAL EDITOR BID**

Stu was contracted for the deliverables and an update to the contract is underway.

## **15 DISCUSSION AND REIVEW OF PATENT FORM AS SUPPLIED BY PATCOM**

PatCom has come up with a non-assert box on the form and this will be presented to PatCom at the December 2004 meeting. This was primarily motivated by our P&Ps that note we will follow the 6a portion of the patent policy. However, PatCom administrator indicates we need to change the P&Ps to conform to the complete IEEE P&Ps. This will be addressed at the next meeting.

## **16 NEW BUSINESS**

None.

## **17 NEXT MEETING**

Date: 15 December 2004  
Host: Mentor Graphics  
Location: Wilsonville, OR USA

Date: 26 January 2005  
Host: JEITA  
Location: Yokohama, Japan

Tentative

Date: 17 February 2005  
Host: Synopsys  
Location: Mountain View, CA USA

Date: 11 March 2005  
Host: Hotel  
Location: Munich, GE

Date: 19 April 2005  
Host: TBD  
Location: TBD

**18      Adjournment**

A motion (Oz Levia, Dennis Brophy) made to adjourn the meeting. The meeting adjourned at 3:35 pm IST.