



# **Accellera HDL+ Committee:**

**1. Verilog++ Committee.**

**2. Assertion Committee**





## HDL+ Committee

### 1) Committee Name And Goals (HDL+).

HDL+ is focused on extending HDL languages to high level of abstraction combined with assertion verification technology. It contains two committees with the following goals:

- a) **Verilog++ Committee:** Extend Verilog 2001 to support architectural and behavioral design (synthesis and verification). The extension is based on Superlog extended synthesis subset (donated by Co-Design) and assertions donations by Verplex.
  - i) Deliverables will be an Accellera standard for Verilog++ LRM. This is an extension for IEEE Verilog 2001 standard LRM.
  - ii) An updated version will be eventually submitted to IEEE for a possible standardization of Verilog 2005.
- b) **Assertion Committee:** Develop Assertions standards for Verilog, VHDL and Accellera C/C++. It provides manual and open source for Verilog library support, with extensions to VHDL and C/C++. The open source will use Source Forge facilities. Assertions are semi-formal monitor / checkers to be used by both simulation and formal tools.
  - i) Deliverables will be:
    - (1) Assertion SRM: Semantic Reference Manual for assertion primitives and macro extension.
    - (2) Syntax development for Verilog++ LRM.
    - (3) Reference implementation as Verilog models first.
    - (4) Coordination with Accellera Formal Committee (VFV) to ensure Formal Language will follow agreed upon semantics.

### 2) Committee members:

- a) **Verilog++:**
  - i) Chair: Vassilios Gerousis (Temporary) [Vassilios.Gerousis@Infineon.Com](mailto:Vassilios.Gerousis@Infineon.Com)
  - ii) and Co-chair: David Kelf (Temporary) [davek@co-design.com](mailto:davek@co-design.com)
- b) **Assertion:**
  - i) Chair: John Emmitt [johne@verplex.com](mailto:johne@verplex.com)
  - ii) Co-Chair: Harry Foster [foster@hp.com](mailto:foster@hp.com)

### 3) Verilog++ Members

Vassilios Gerousis - Infineon  
Harry Foster - Hewlett Packard  
Lauro Rizatti - Get2Chip  
David Knapp - Get2Chip



Pradeep Fernandes - Get2Chip  
Dave Kelf - Co-Design  
Phil Moorby - Co-Design  
Simon Davidmann - Co-Design  
Mike McNamara - Verisity Design, IEEE 1364  
John Sanguinetti - Forte design  
Dave Springer - Cynapps  
John Emmitt - Verplex  
KC Cheng – Verplex  
Stu Sutherland - Sutherland HDL, IEEE 1364  
Muraoka – STARC  
David Smith – Avanti! Corporation  
Clifford Cummings – Sunburst Design, IEEE 1364

#### 4) Assertion Members

John Emmitt ==> Chairman (Verplex)  
Harry Foster ==> Co-chairman (Hewlett-Packard)  
Frank Dresig -- AMD  
Susan Wong -- Axis  
Jeff Shaffer -- Compaq  
Sean Dart -- Chronology  
Steve Dean -- Chronology  
Mike Meredith -- Chronology  
Dave Kelf -- Co-Design  
Henry Cox -- Co-Design  
Brett Cline -- CynApps  
Andrew Goodrich – CynApps  
Jerry Vauk – Sun Micro Systems  
Claudionor Coelho -- Verplex  
Michal Siwinski -- Verplex

#### 5) Milestones

- a) F/B conference Sept. 23. -- Complete Preliminary technical contents. V2001, V++ tutorial (turn V2001 session into V++).
- b) January 2002 -- Technical Review Complete
- c) HDLCON 2002 (March 11-12) -- Tutorial and LRM draft.
- d) May 2002: Final draft to Accellera Board and Members
- e) DAC 2002. (June 2002) -- Accellera standard release

#### 6) Donations and Technology Assignment to Accellera



- a) Co-Design has donated Superlog Synthesizable subset as the main core for Verilog++. The HDL+ committee reviewed language on June 14.
- b) Verplex has donated the assertion library and manual.  
More members are signing in to participate. Our plans are:
- c) Technology assignment to Accellera by both companies were signed and accepted by Accellera.

**7) Deliverables**

- a) Language Reference Manual for Verilog++.
- b) Semantic Reference Manual for Assertion.
- c) Sources models for both Verilog++ and Assertion.

**8) Technical Editor**

Stu Sutherland.

**9) Publication:**

- a) Web Address <http://www.eda.org/vlog-pp> (Under Construction).
  - i) Email Reflector Is [vlog-pp@eda.org](mailto:vlog-pp@eda.org)
- b) Web Address <http://www.eda.org/assertion> (Under constructions).
  - i) Email Reflector is [assertion@eda.org](mailto:assertion@eda.org)
- c) Tutorial of Verilog++ at DAC 2001.
- d) Manual of OVL (assertion) and Verilog libraries. <http://www.verificationlib.org>

**10) Partnership with Other Organization.**

Participation by STARC from Japan.